

# MANUFACTURERS' RECORD

A WEEKLY SOUTHERN INDUSTRIAL RAILROAD AND FINANCIAL NEWSPAPER.

## Southern Textile Growth.

For the first time Southern cotton mills used last year more cotton than mills in the rest of the country. How they have advanced from using 30.9 per cent. of that taken by the country ten years ago to using 50.42 per cent. during the past year is shown by the following table, the figures for Northern mills showing takings and those for Southern mills actual consumption:

Year ended August 31—	Southern Mills, Bales.	Northern Mills, Bales.	Total, Bales.
1894.....	718,515	1,601,173	2,319,688
1895.....	862,838	2,083,839	2,946,677
1896.....	904,701	1,600,271	2,504,972
1897.....	1,042,671	1,804,680	2,847,351
1898.....	1,231,841	2,211,740	3,443,581
1899.....	1,399,399	2,190,095	3,589,494
1900.....	1,597,112	2,068,300	3,665,412
1901.....	1,620,931	1,967,570	3,588,501
1902.....	1,937,971	2,050,774	3,988,745
1903.....	2,000,729	1,967,635	3,968,364

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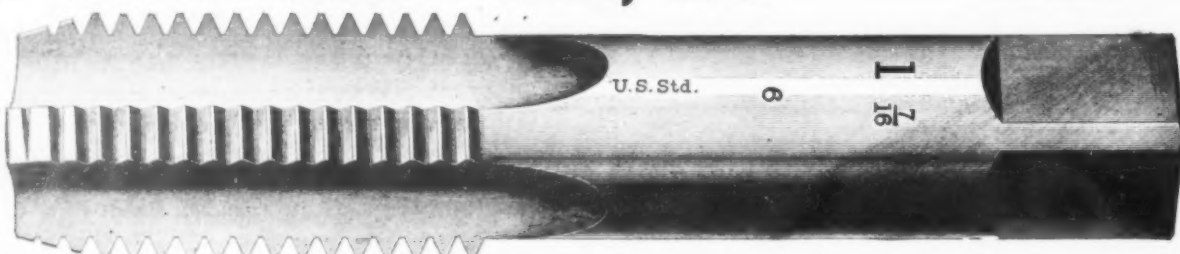
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Baltimore, September 10, 1903.

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Steam Shovels,  
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We manufacture machinery in this line in all sizes and suitable for all classes of work. Where large capacity is wanted and where exceedingly hard material is encountered, we call special attention to Model "80" and Model "90." We invite the most careful investigation. For full information address

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No. 1—for use when newly organized; No. 2—for conversion of state banks into national.

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WORKS AT NEWPORT NEWS, VA., ON HAMPTON ROADS.

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Length on top .....	610 feet.	527 feet.
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Width on bottom .....	50 "	80 "
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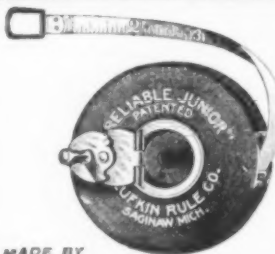
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## Classified Index of Articles Advertised

FOR ALPHABETICAL INDEX See Page 30

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Robertson Mfg. Co., James, Baltimore, Md.  
Valk & Murdoch Iron Works, Charleston, S. C.

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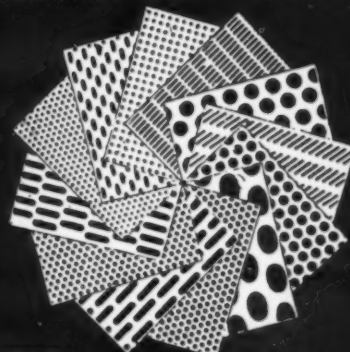


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Sanford-Day Iron Works, Knoxville, Tenn.  
Savannah Loco. Wks. & Supply Co., Savannah, Ga.  
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Wouham-Magor Engine Works, New York, N. Y.

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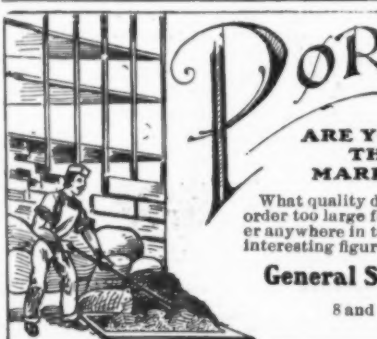
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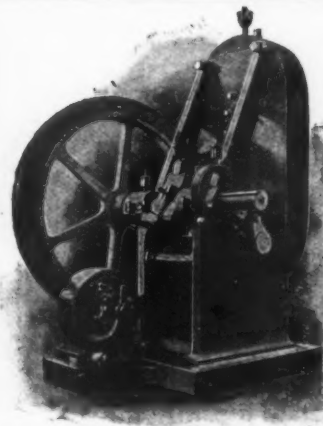
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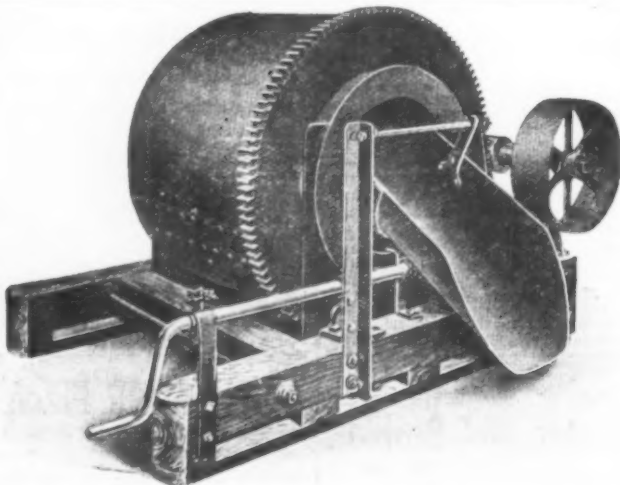
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Rand Drill Co., New York, N. Y.

Robinson, J. M., Mfg. Co., Cincinnati, O.

Savannah Locomotive &amp; Car Works, Savannah, Ga.

**Handle Mch. [See Woodworking Mch.]**

Fay, J. A., &amp; Egan Co., Cincinnati, O.

Root, B. M., York, Pa.

**Hardware Specialties.**

Wrightsville Hardware Co., Wrightsville, Pa.

**Hay Tools.**

Myers &amp; Bro., F. E., Ashland, O.

**Heating Apparatus.**

American Blower Co., Detroit, Mich.

Andrews &amp; Johnson Co., Chicago, Ill.

Boston Blower Co., Hyde Park, Mass.

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Downman-Doxler Mfg. Co., Atlanta, Ga.

Monitor Steam Generator Mfg. Co., Baltimore, Md.

Peck-Hammond Co., The, Cincinnati, O.

Sturtevant Co., B. F., Boston, Mass.

Webster, Warren Co., Camden, N. J.

**Holding Machinery.**

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Contractors' Plant Mfg. Co., Buffalo, N. Y.

Flory, S. Mfg. Co., Bangor, Pa.

Hardie-Tynes Mfg. Co., Birmingham, Ala.

Hayward Co., New York, N. Y.

Jeffrey Mfg. Co., The, Columbus, O.

Link-Belt Engineering Co., Philadelphia, Pa.

Lidgerwood Mfg. Co., New York, N. Y.

Males Co., The, Cincinnati, O.

Pricer, S. M., Machinery Co., Norfolk, Va.

Moyer, J. W., &amp; Co., Philadelphia, Pa.

Rawson &amp; Morrison Mfg. Co., Cambridge, Boston, Mass.

Sprague Canning Machinery Co., Chicago, Ill.

Sullivan Machinery Co., Chicago, Ill.

**Holists. (Electric.)**

Pawling &amp; Harnischfeger, Milwaukee, Wis.

**Holists. (Pneumatic, Motor.)**

Rand Drill Co., New York, N. Y.

**Horse Shoes.**

Old Dominion Iron &amp; Nail Works Co., Richmond, Va.

The Diamond State Steel Co., Wilmington, Del.

**Hose.**

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Eureka Fire Hose Co., New York, N. Y.

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Peerless Rubber Mfg. Co., New York, N. Y.

Voorhees Rubber Mfg. Co., Jersey City, N. J.

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Glamorgan Pipe &amp; Foundry Co., Lynchburg, Va.

Ludlow Valve Mfg. Co., Troy, N. Y.

Wood, R. D., &amp; Co., Philadelphia, Pa.

**Hydraulic Machinery.**

American, Chicago, Ill.

Watson-Stillman Co., New York, N. Y.

Wood, R. D., &amp; Co., Philadelphia, Pa.

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Niagara Hydraulic Engine Co., Chester, Pa.

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Aretic Mch. Co., Canton, Ohio.

Barber Mfg. Co., A. H., Chicago, Ill.

Brown-Cochran Co., Lorain, O.

Frick Co., Waynesboro, Pa.

Healy Ice Machine Co., Chicago, Ill.

McWilliams, Jos., &amp; Co., Louisville, Ky.

Remington Machine Co., Wilmington, Del.

Stillwell-Bierce &amp; Smith-Valle Co., Dayton, O.

United Iron Works Co., Springfield, Mo.

Vilter Mfg. Co., Milwaukee, Wis.

Wolf Co., The, Fred. W., Chicago, Ill.

York Mfg. Co., York, Pa.

**Incorporators. (Companies.)**

Delaware Corporation Co., Wilmington, Del.

Delaware Trust Co., Wilmington, Del.

District of Columbia Charter Co., Washington, D. C.

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Amer. Steam Gauge &amp; Valve Mfg. Co., Jam. Plain, Mass.

Crosby Steam Gauge &amp; Valve Co., Boston, Mass.

Scranton Steam Pump Co., Scranton, Pa.

**Industrial Opportunities.**

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Fort Worth Board of Trade, Fort Worth, Tex.

Lynchburg Traction &amp; Light Co., Lynchburg, Va.

Latourche Progressive Union, Thibodaux, La.

Old Dominion Land Co., Newport News, Va.

Bayne, La., C. W. Lyman, Secretary Progressive Union.

Richardson, M. V., &amp; T. Agent, Washington, D. C.

Southern Pacific Houston, Tex.

Seaboard Air Line, Portsmouth, Va.

Sutherland, Howard, Land Agent, Elkins, W. Va.

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Koppel, Arthur, New York City.

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Jenkins Bros., New York, N. Y.

Lunkenshelmer Co., Cincinnati, O.

Ohio Injector Co., Wadsworth, O.

Penberthy Injector Co., Detroit, Mich.

Schodols, J. S., Sons, Co., Macon, Ga.

Simmons, John, Co., New York, N. Y.

**Insulated Wire.**

Electrical Material Co., Baltimore, Md.

Hazard Manufacturing Co., Wilkes Barre, Pa.

**Insulators. (Glass.)**

Electrical Material Co., Baltimore, Md.

**Insulator Pins.**

Electrical Material Co., Baltimore, Md.

Houston &amp; Liggett, Lewisburg, Tenn.

**Insulator Pin Machinery.**

Chattanooga Machinery Co., Chattanooga, Tenn.

**Insurance.**

Hartford Steam Boiler Inspection &amp; Insurance Co., Hartford, Conn.

Maryland Casualty Co., Baltimore, Md.

**Iron.**

Alabama Cannel Coal &amp; Iron Co., Birmingham, Ala.

American Sheet Steel Co., New York, N. Y.

Bourne-Fuller Co., Cleveland, O.

Old Dominion Iron &amp; Nail Works Co., Richmond, Va.

**Iron Brokers.**

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Cox, Jr., Justice, &amp; Co., Inc., Philadelphia, Pa.

Males Co., Cincinnati, O.

**Jacks. (Lifting, Track and Oil Well.)**

Watson-Stillman Co., New York, N. Y.

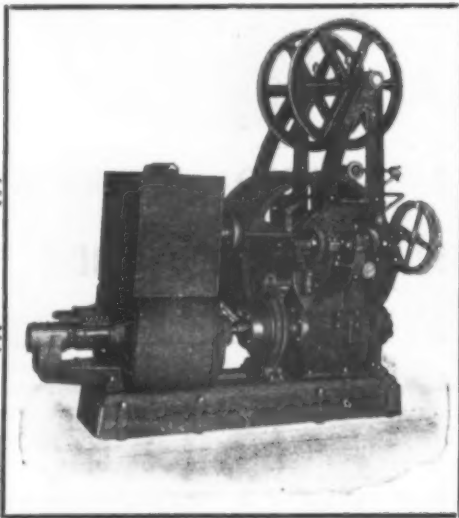
**Kettles. (Steam Jacket.)**

Badger, E. E., &amp; Son, Boston, Mass.

Petroleum Iron Works Co., Washington, Pa.

**Knife Grinders. (New Automatic.)**

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APPLIANCESTRAVELING  
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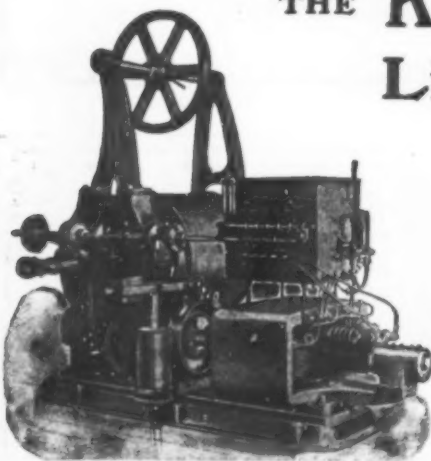
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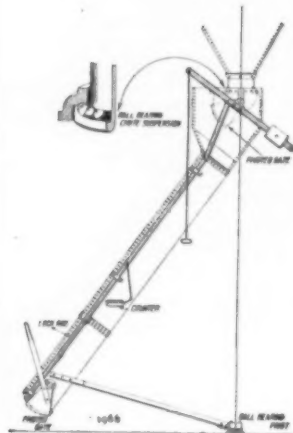
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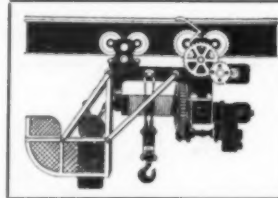
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FOR ALPHABETICAL  
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McMichael & Wildman Mfg. Co., Norristown, Pa.  
Nye & Treddick Co., Philadelphia, Pa.  
Ruth Auto. Knitting Machine Co., York, Pa.  
Scott & Williams, Philadelphia, Pa.

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General Electric Co., Schenectady, N. Y.  
Kentucky Electric Co., Owensboro, Ky.  
New York & Ohio Co., Warren, O.  
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Lamp Replicator. (Incandescent.)  
Incandescent Elec. Lgt. Manipulator Co., Boston, Mass.

## Lamp Shades &amp; Guards. (Incandescent.)

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Brookston, Fendick & Co., Brunswick, Ga.  
Clark, Chas. E., Augusta, Ga.  
Martin & Bro., Augusta, Ga.  
Richards, M. V., & Co., Industrial Art., Wash., D. C.  
Rutherfordland, Howard, Land Agent, Elkins, W. Va.  
Southern Pacific, Houston, Tex.  
Watson, R. E., Atlanta, Ga.

## Lathes. (Engine.)

Baird Mch. Co., Pittsburg, Pa.  
Barnes, W. F. & J., Co., Rockford, Ill.  
Gibbes, W. H. & Co., Columbia, S. C.  
Robinson, W. C. & Son, Co., Baltimore, Md.  
McCabe, J. J., New York, N. Y.  
Price, S. M., Machinery Co., Norfolk, Va.  
Savannah Loco. Works & Supply Co., Savannah, Ga.  
Schumacher & Boye, Cincinnati, O.  
Walke, Henry, Co., Norfolk, Va.

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Adams Laundry Machinery Co., Troy, N. Y.  
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Sinclair Co., S. H., Chicago, Ill.  
Wilson Laundry Machinery Co., Columbia, Pa.

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Hertz, Theo. Metal Co., St. Louis, Mo.

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Carolina Portland Cement Co., Charleston, S. C.  
Maryland Lime & Cement Co., Balto., Md.  
Southeastern Lime & Cement Co., Charleston, S. C.  
Warner, Charles Co., Wilmington, Del.

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Fairmount Machine Co., Philadelphia, Pa.

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Galeta Signal Oil Co., Galena, Pa.  
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Cook's, Adam, Sons, New York, N. Y.

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Crosby Steam Gage & Valve Co., Boston, Mass.  
Detroit Lubricator Co., Detroit, Mich.

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Kirby Lumber Co., Houston, Tex.  
Price & Head, Baltimore, Md.  
Red Cypress Lumber Co., Macon, Ga.  
Stetson Lumber Co., Macon, Ga.

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Lefter, Charles, & Co., Brooklyn, N. Y.  
Moshannon Mfg. Co., Philadelphia, Pa.  
Ryersford Foundry & Machine Co., Ryersford, Pa.

## Machinery Bargains. (New &amp; Sec. Hand.)

Affleck, Geo. E., New York, N. Y.  
American, Chicago, Ill.  
American Elec. Supply & Mfg. Co., New York, N. Y.

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Armstrong, R. S. & Bro., Atlanta, Ga.  
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Bennett, G. L., New York, N. Y.

## Machinery. (General.)

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Braden, Jas. S., New York, N. Y.  
Brown & Zortman Machinery Co., Pittsburg, Pa.

## Machinery. (General.)

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Carlin Mch. & Supply Co., Allegheny, Pa.  
Casey, D. L., Mch. Co., Springfield, O.

## Machinery. (General.)

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Cleveland Baiting & Machinery Co., Cleveland, O.  
Clyde Mch. Works, Chicago, Ill.

## Machinery. (General.)

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Columbus Iron & Steel Co., Columbus, O.  
Contractors' Equipment Co., Philadelphia, Pa.

## Machinery. (General.)

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Contractors' Supply & Equipment Co., Chicago, Ill.  
Cox, Justice, Jr., & Co., Ltd., Philadelphia, Pa.

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Driscoll, John T., & Co., Chicago, Ill.  
Fidelity Machine & Metal Co., Philadelphia, Pa.

## Machinery. (General.)

Girard Machine & Tool Co., Philadelphia, Pa.  
Hanley, Wm., Bradford, Pa.  
Hartfelder-Garbutt Co., Savannah, Ga.

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Hittner's, H. A., Sons, Philadelphia, Pa.  
Huntington Machinery & Supply Co., Wilkesbarre, Pa.  
Kaiser, A. V. & Co., Philadelphia, Pa.

## Machinery. (General.)

Kennedy, L. E. & Co., New York, N. Y.  
Kohn, J. W. & Co., Cleveland, O.  
Lehman, Charles T., Birmingham, Ala.

## Machinery. (General.)

Lodge & Shipley Mch. Tool Co., Cincinnati, Ohio.  
Lucas, J. C. M., Baltimore, Md.  
Mallory, J. D., Baltimore, Md.

## Machinery. (General.)

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Faulstich & Co., Philadelphia, Pa.  
Price Machinery Co., Chicago, Ill.

## Machinery. (General.)

Rosier, MacGovern & Co., New York, N. Y.  
Samuel, Frank, Philadelphia, Pa.  
Saxton, J. C., New York, N. Y.

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Shaw, Willis, Chicago, Ill.  
Stewart, John A., Electric Co., Cincinnati, O.

## Machinery. (General.)

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Thompson, Son & Co., New York, N. Y.  
Toomey, Frank, Philadelphia, Pa.

## Machinery. (General.)

Waters, John A. & Co., Richmond, Va.  
Wicks Bros., Pittsburg, Pa.  
Wolf, L. & Bro., Cincinnati, O.

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Machinery Tools.

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Cincinnati Milling Machine Co., Cincinnati, O.  
Greaves, Kluman & Co., Cincinnati, O.  
Landis Tool Co., Waynesboro, Pa.

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Pratt & Whitney, Hartford, Conn.  
Price, S. M., Machinery Co., Norfolk, Va.

Savannah Loco. Works & Supply Co., Savannah, Ga.  
Schumacher & Boye, Cincinnati, O.

Walke, Henry, Co., Norfolk, Va.  
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Allington & Curtis, Saginaw, Mich.  
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Boston Blower Co., Hyde Park, Mass.  
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McIntire, P. C. & Co., Charlotte, N. C.

Metall-Working Machinery.  
Baird Mch. Co., Pittsburg, Pa.

Barnes, W. F. & J., Co., Rockford, Ill.  
Bortsch & Co., Cambridge City, Ind.

Bickford Drill & Tool Co., Cincinnati, O.  
Cincinnati Milling Machine, Cincinnati, O.

Gibbes, W. H. & Co., Columbia, S. C.  
Greaves, Kluman & Co., Cincinnati, O.  
Landis Tool Co., Waynesboro, Pa.

McCabe, J. J., New York, N. Y.  
Niagara Machine & Tool Works, Niagara Falls, N. Y.

Pratt & Whitney Co., Hartford, Conn.  
Price, S. M., Machinery Co., Norfolk, Va.

Robinson, J. M., Mfg. Co., Cincinnati, O.  
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Schumacher & Boye, Cincinnati, O.

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Whitson Machine Co., D. E., New London, Conn.

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Pittsburg Meter Co., E. Pittsburg, Pa.

Meters. (Water.)  
Pittsburg Meter Co., E. Pittsburg, Pa.

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Praray, C. A. M. & Co., Providence, R. I.

Shaw, Fred, G., Augusta, Ga.  
Tompkins, D. A., Co., Charlotte, N. C.

Whaley, W. B. Smith & Co., Columbia, S. C.  
Wheeler & Runge, Charlotte, N. C.

Milling Machines.  
Baird Mch. Co., Pittsburg, Pa.

Cincinnati Milling Machine Co., Cincinnati, O.  
Walke, Henry, Co., Norfolk, Va.

Mill Supplies.  
Alexander, S. B., Jr., Co., Charlotte, N. C.

Baird Mch. Co., Pittsburg, Pa.  
Cameron & Barker Co., Charleston, S. C.

Case Mfg. Co., Columbus, O.  
Columbia Supply Co., Columbia, S. C.

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Greenwald Co., L. & E., Cincinnati, O.

Hartfelder-Garbutt Co., Savannah, Ga.  
Lombard Iron Works, Supply Co., Augusta, Ga.

Mecklenburg Iron Works, Charlotte, N. C.  
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Smith-Courtney Co., Richmond, Va.

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Ingersoll-Sergeant Drill Co., New York, N. Y.  
Jeffrey Mfg. Co., Columbus, O.

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Bartlett, C. O. & Snow Co., Cleveland, O.

Drake Standard Mch. Wks., Chicago, Ill.  
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Ransome Concrete Machinery Co., New York, N. Y.  
Walker & Elliott, Wilmington, Del.

Mortar Colors.  
Chattanooga Paint Co., Chattanooga, Tenn.

French, Samuel H. & Co., Philadelphia, Pa.  
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Old Dominion Iron & Nail Works Co., Richmond, Va.  
Nails. (Wire.)

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Oats Cleaner. (Automatic.)

Kasper Oats Cleaner Co., Chicago, Ill.  
Office Fixtures.

Dearborn Desk Co., Birmingham, Ala.  
Himmel, M. L. & Son, Baltimore, Md.

Wisconsin Iron & Wire Works, Milwaukee, Wis.  
Oils.

Cook's, Adam, Sons, New York, N. Y.  
Bird, W. H. & Co., Charleston, S. C.

Galena-Signal Oil Co., Franklin, Pa.  
Ironides Co., Columbus, O.

Miller Oil & Supply Co., Indianapolis, Ind.  
Robinson, Wm. C. & Son, Co., Baltimore, Md.

Oil-Burning Appliances.  
Petroleum Iron Works Co., Washington, Pa.

Rockwell Engineering Co., New York, N. Y.  
Oilers.

Gem Mfg. Co., Pittsburg, Pa.  
Ironides Co., Columbus, O.

Lankenheimer Co., Cincinnati, O.  
Organizers and Developers.

MacAfee, John Elia, Philadelphia, Pa.  
Mechanics' Electric Co., Boston, Mass.

Railways & Light Co., Baltimore, Md.  
Riedon, H. C., Washington, D. C.

Rutter, C. H., Easton, Pa.  
Zell, Root, Ross, Birmingham, Ala.

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Baltimore Engine Co., Baltimore, Md.

Boston Belting Co., Boston, Mass.  
Broderick & Bascom Rope Co., St. Louis, Mo.

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Pennsylvania Rubber Co., New York, N. Y.

Yorhies Rubber Mfg. Co., Jersey City, N. J.  
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Columbia Refining Co., New York, N. Y.

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Paint. (Roofing, etc.)

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Barrett Mfg. Co., Philadelphia, Pa.

Bird, W. H. & Co., Philadelphia, Pa.  
Buchanan-Foster Co., Philadelphia, Pa.

Chattanooga Paint Co., Chattanooga, Tenn.  
Detroit Graphite Mfg. Co., Detroit, Mich.

Dixon Crucible Co., Joseph, Jersey City, N. J.  
Eastern Granite Refining Co., New York, N. Y.

French, Samuel H. & Co., Philadelphia, Pa.  
Ironides Co., Columbus, O.

Simmons, John, Co., New York, N. Y.  
Standard Paint Co., New York, N. Y.

Wisconsin Graphite Co., Pittsburg, Pa.  
Painting Machinery.

Star Brass Works, The, Chicago, Ill.  
Paper. (Roofing, Building, Sheathing, etc.)

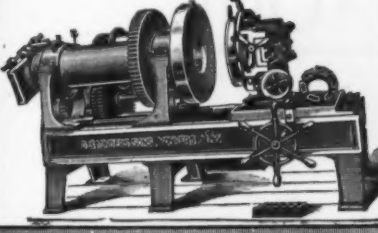
Armitage Mfg. Co., The, Richmond, Va.  
Barrett Mfg. Co., Philadelphia, Pa.

Buchanan-Foster Co., Philadelphia, Pa.  
Eastern Granite Refining Co., New York, N. Y.

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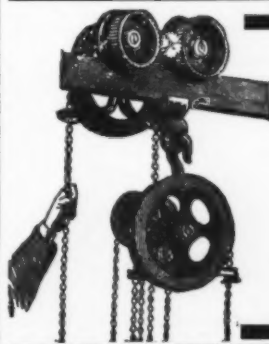
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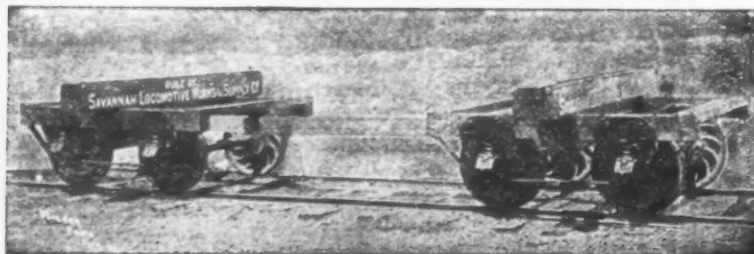


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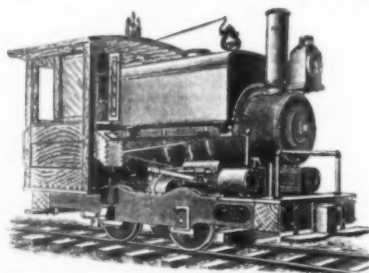
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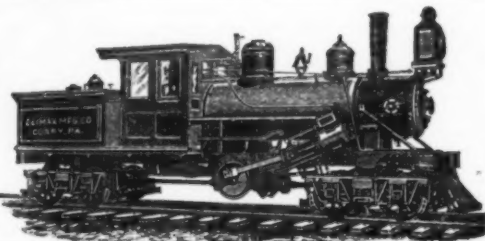
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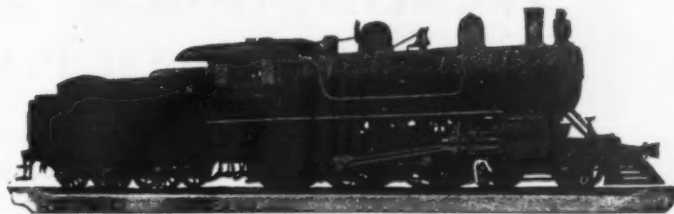
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Wisconsin Graphite Co., Pittsburg, Pa.  
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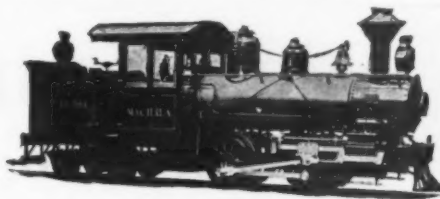
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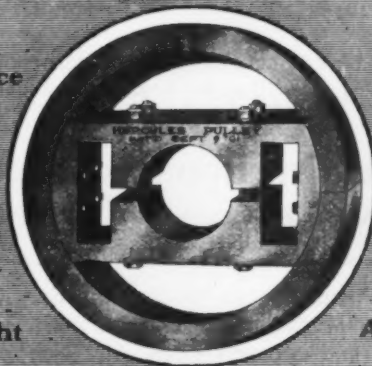
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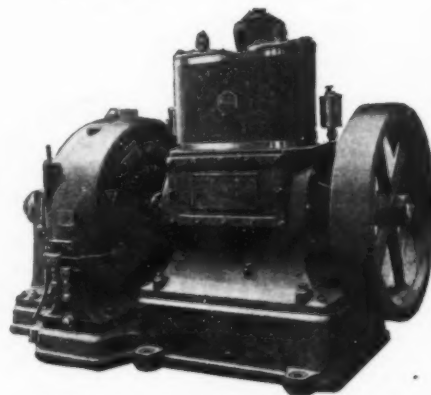
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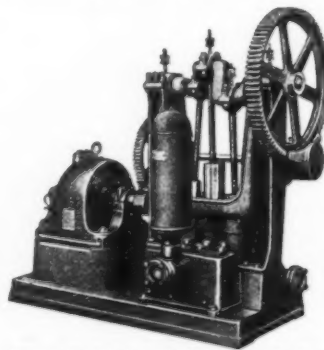
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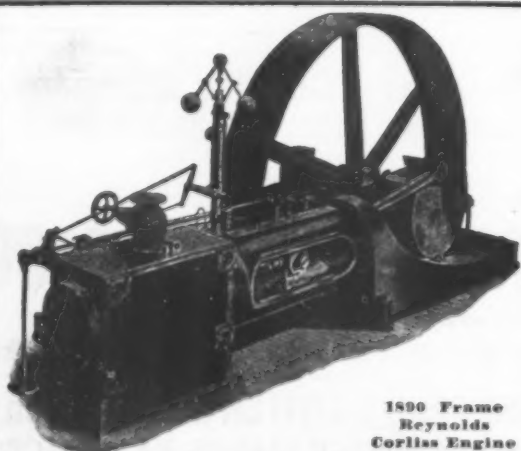
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**Western Supply & Mfg. Co.**, East St. Louis, Mo.  
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**Zelicker, W. A., Supply Co.**, St. Louis, Mo.  
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**More Twist Drill & Machine Co.**, New Bedford, Mass.  
**Pratt & Whitney Co.**, Hartford, Conn.  
**Polk & J. & Son**, Millersburg, Pa.  
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**Crosby Steam Gate & Valve Co.**, Boston, Mass.  
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**Acme Road Machinery Co.**, Frankfort, N. Y.  
**Kelly-Springfield Road Roller Co.**, Springfield, O.  
**Kilbourne & Jacobs Mfg. Co.**, Columbus, O.  
**Rock Crushers.**  
**Austin Mfg. Co.**, Chicago, Ill.  
**Cresson, Geo. V. Co.**, New York, N. Y.  
**Kent Mill Co.**, New York, N. Y.  
**N. J. Foundry & Machine Co.**, New York, N. Y.  
**Roofers' and Timbers' Supplies.**  
**Chattanooga Roof & Fdry. Co.**, Chattanooga, Tenn.  
**Niagara Machine & Tool Works**, Buffalo, N. Y.  
**Merchant & Co., Inc.**, Philadelphia, Pa.  
**Robinson, J. M. Mfg. Co.**, Cincinnati, O.  
**Roofing Tiles.** (See Tiles Roofing.)  
**Roofings.** (Felt, Tar, Asphalt, Paper, etc.)  
**American Roofing Co.**, Mobile, Ala.  
**American Tinplate Co.**, Pittsburgh, Pa.  
**Armstrong Mfg. Co.**, The Richmond, Va.  
**Asphalt Roofing Co.**, New York, N. Y.  
**Barrett Mfg. Co.**, Philadelphia, Pa.  
**Buchanan-Foster Co.**, Philadelphia, Pa.  
**Bird, F. W., & Co.**, East Walpole, Mass.  
**Bird, J. A., & W. & Co.**, Boston, Mass.  
**Carey, Philip, Mfg. Co.**, Lockland, O.  
**Chattanooga Roof & Fdry. Co.**, Chattanooga, Tenn.  
**Eastern Granite Roofing Co.**, New York, N. Y.  
**Garrett, O. S., & Son, Co.**, Philadelphia, Pa.  
**Maryland Lime & Cement Co.**, Baltimore, Md.  
**Miller Oil & Supply Co.**, Indianapolis, Ind.  
**National Roofing & Supply Co.**, Louisville, Ky.  
**Standard Paint Co.**, New York, N. Y.  
**Stowell Mfg. Co.**, Jersey City, N. J.  
**Warren Chemical & Mfg. Co.**, New York, N. Y.  
**Zelicker, W. A., Supply Co.**, St. Louis, Mo.  
**Roofings.** (Metal Shingles.)  
**Chattanooga Roof & Fdry. Co.**, Chattanooga, Tenn.  
**Cortright Metal Roofing Co.**, Philadelphia, Pa.  
**Merchant & Co., Inc.**, Philadelphia, Pa.  
**Montrose Metal Shingle Co.**, Camden, N. J.  
**Penn Metal Ceiling & Roofing Co.**, Phila., Pa.  
**Roofings.** (Slates.)  
**Downman-Dorrier Mfg. Co.**, Atlanta, Ga.  
**Galt, John, & Sons**, New York, N. Y.  
**Genuine Bangor Slate Co.**, Easton, Pa.  
**McKenna, David, Slatington, Pa.**  
**Roofing and Slating.** (Metal.)  
**Cortright Metal Roofing Co.**, Philadelphia, Pa.  
**Downman-Dorrier Mfg. Co.**, Atlanta, Ga.  
**Easton Foundry & Machine Co.**, Easton, Pa.  
**Merchant & Co., Inc.**, Philadelphia, Pa.  
**Scaife, Wm. B., & Sons Co.**, Pittsburgh, Pa.  
**Simpers, Thos. W., & Co.**, Philadelphia, Pa.  
**Virginia Bridge & Iron Co.**, Roanoke, Va.  
**Rope.** (Transmission.)  
**American Mfg. Co.**, The, New York, N. Y.  
**Broderick & Macdon Rope Co.**, St. Louis, Mo.  
**Caldwell, W. E., & Co.**, Louisville, Ky.  
**Columbian Cordage Co.**, Auburn, N. Y.  
**Cresson Co., Geo. V., New York, N. Y.**  
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**Ironides Co.**, Columbus, O.  
**Link-Belt Engineering Co.**, Philadelphia, Pa.  
**Woods' Sons, T. B., Chambersburg, Pa.**  
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**Eureka Fire Hose Co.**, New York, N. Y.  
**New Jersey Car Spring & Rubber Co.**, Jersey City, N. J.  
**Pennsylvania Rubber Co.**, New York, N. Y.  
**Voorhees Rubber Mfg. Co.**, Jersey City, N. J.  
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**Crosby Steam Gauge & Valve Co.**, Boston, Mass.  
**Lunkenheimer Co.**, Cincinnati, O.  
**Reliance Gauge Column Co.**, Cleveland, O.  
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**York Safe & Lock Co.**, York, Pa.  
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**Fay, J. A., & Egan Co.**, Cincinnati, O.  
**Smith, H. B., Machine Co.**, Smithville, N. J.  
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**Miller Oil & Supply Co.**, Indianapolis, Ind.  
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**Atlas, E. C., & Co.**, Indianapolis, Ind.  
**Gibbs, W. H., & Co.**, Columbia, S. C.  
**Huther Bros.**, Rochester, N. Y.  
**Miller Oil & Supply Co.**, Indianapolis, Ind.  
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**Bailey-Lobby Co.**, The, Charleston, S. C.  
**Beach, H. W., Montrose, Pa.**  
**Cameron & Barkley Co.**, Charleston, S. C.  
**Chattanooga Machinery Co.**, Chattanooga, Tenn.  
**Columbia Supply Co.**, Columbia, S. C.  
**DeLoach Mfg. Co.**, Atlanta, Ga.  
**Farquhar Co., A. B., Ltd.**, York, Pa.  
**Fay, J. A., & Egan Co.**, Cincinnati, O.  
**Frick Co.**, Waynesboro, Pa.  
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**Hartfelder-Garbutt Co.**, Savannah, Ga.  
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**Lane Mfg. Co.**, Montpelier, Vt.  
**Mecklenburg Iron Works**, Charlotte, N. C.  
**Schofield, J. S., Sons Co.**, Macon, Ga.  
**Smith, H. B., Machine Co.**, Smithville, N. J.  
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**Southern Eng. & Boiler Works**, Jackson, Tenn.  
**Union Iron Works Co.**, Selma, Ala.  
**Zelicker, W. A., Supply Co.**, St. Louis, Mo.  
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**Carver Cotton Gin Co.**, East Bridgewater, Mass.  
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**Osgood Scale Co.**, Birmingham, N. Y.  
**Richardson Scale Co.**, New York, N. Y.  
**Standard Scale & Supply Co., Ltd.**, Pittsburgh, Pa.  
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**New Jersey Wire Cloth Co.**, Trenton, N. J.  
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**Cresson Co., Geo. V., New York, N. Y.**  
**Harrington & King Perforating Co.**, Chicago, Ill.  
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**Jeffrey Mfg. Co.**, The, Columbus, O.  
**Ladlow-Saylor Wire Co.**, The, St. Louis, Mo.  
**New Jersey Wire Cloth Co.**, Trenton, N. J.  
**Meyers Mfg. Co., Fred. J., Hamilton, O.**  
**Mundt & Sons, Charles**, New York, N. Y.  
**McLanahan-Stone Machine Co.**, Hollidaysburg, Pa.  
**Wisconsin Iron & Wire Works**, Milwaukee, Wis.  
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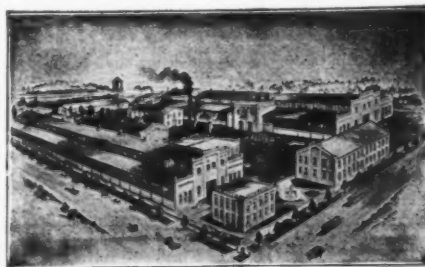
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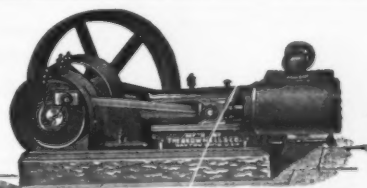
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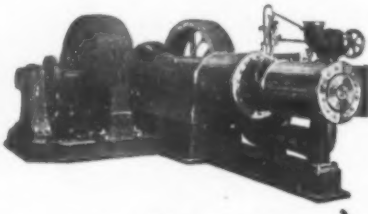
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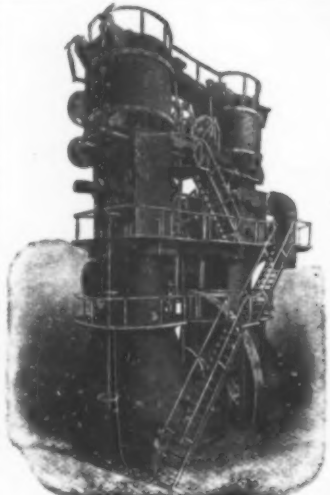


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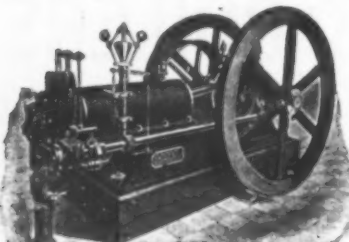
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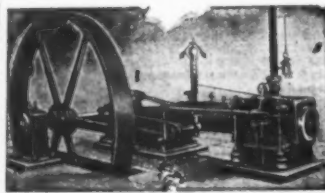
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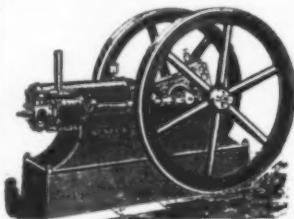
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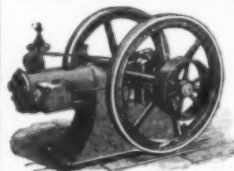


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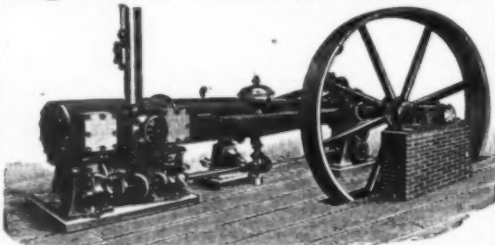


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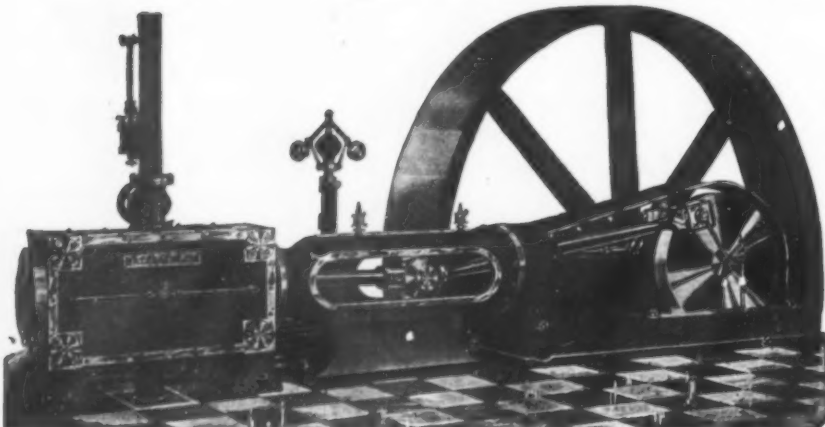
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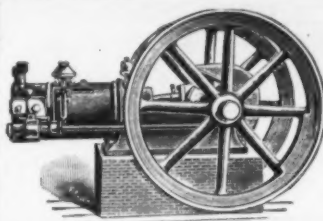


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**Tompson, D. A., Co.,** Charlotte, N. C.  
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**Pomona Terra Cotta Co.,** Pomona, N. C.  
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**Cardwell Machine Co.,** Richmond, Va.  
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**American Tinplate Co.,** New York, N. Y.  
**Tinplate.**  
**American Tinplate Co.,** New York, N. Y.  
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**Cardwell Machine Co.,** Richmond, Va.  
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**Morse Twist Drill & Machine Co.,** New Bedford, Mass.  
**Polk, A. J., & Son,** Millersburg, Pa.  
**Pratt & Whitney Co.,** Hartford, Conn.  
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**Rand Drill Co.,** New York, N. Y.  
**Tools. (Tinners.)**  
**Niagara Machine & Tool Works,** Buffalo, N. Y.  
**Tools. (For Rwy. Rep. Shops.) (See Port. Tools.)**  
**Torches.**  
**Gem Mfg. Co.,** Pittsburg, Pa.  
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**Hunt Co.,** C. W., New York, N. Y.  
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**Lidgerwood Mfg. Co.,** New York, N. Y.  
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**McLanahan-Stone Machine Co.,** Hollidaysburg, Pa.  
**Trenton Iron Co.,** Trenton, N. J.  
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**Westinghouse Machine Co.,** Pittsburg, Pa.  
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**Columbia Supply Co.,** Columbia, S. C.  
**Crosby Steam Gauge & Valve Co.,** Boston, Mass.  
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**Ludlow Valve Mfg. Co.,** Troy, N. Y.  
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**Wolf, Fred, W., & Co.,** Chicago, Ill.  
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**Leffel, James, & Co.,** Springfield, O.  
**Norrie, Burnham & Co., Inc.,** Glen Rock, Pa.  
**Rindon-Alcott Turbine Co.,** Mount Holly, N. J.  
**Smith Co.,** S. E., New York, N. Y.  
**Stillwell-Sierce & Smith-Vaile Co.,** Dayton, O.  
**Westinghouse, Church, Kerr & Co.,** Pittsburg, Pa.  
**Westinghouse Mch. Co.,** Pittsburg, Pa.  
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**Pittsburg Motor Co.,** E. Pittsburg, Pa.  
**Worthington, Henry B.,** New York, N. Y.  
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**Richardson Scale Co.,** New York, N. Y.  
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**Andrews, Perry & Bro.,** Atlanta, Ga.  
**Bacon Air Lift Co.,** New York, N. Y.  
**Cook Well Co.,** The, St. Louis, Mo.  
**Ford, Isaac H.,** New York, N. Y.  
**Hughes Specialty Well Drilling Co.,** Charleston, S. C.  
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**Kilbourne & Jacobs Mfg. Co.,** Columbus, O.  
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**Amer. Steam Gauge & Valve Mfg. Co.,** Jam. Plain, Mass.  
**Crosby Steam Gauge & Valve Co.,** Boston, Mass.  
**Lunkenheimer Co.,** Cincinnati, O.  
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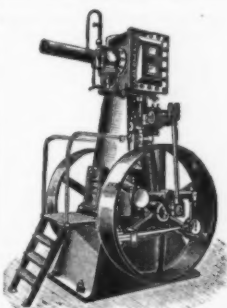


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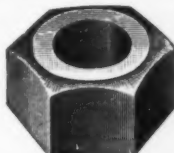
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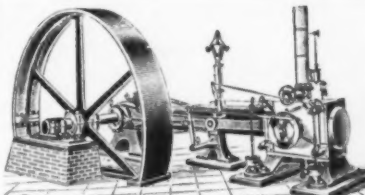
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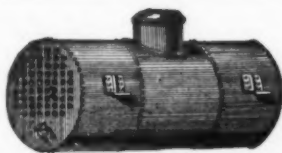
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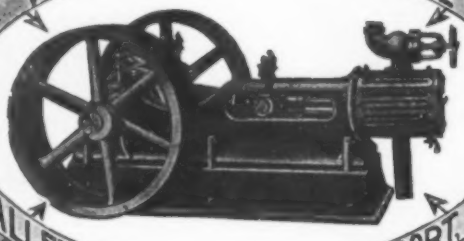
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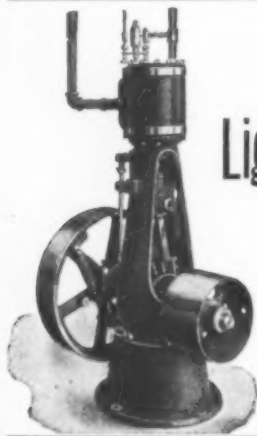
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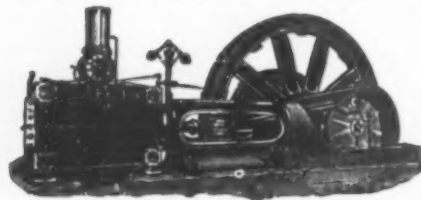
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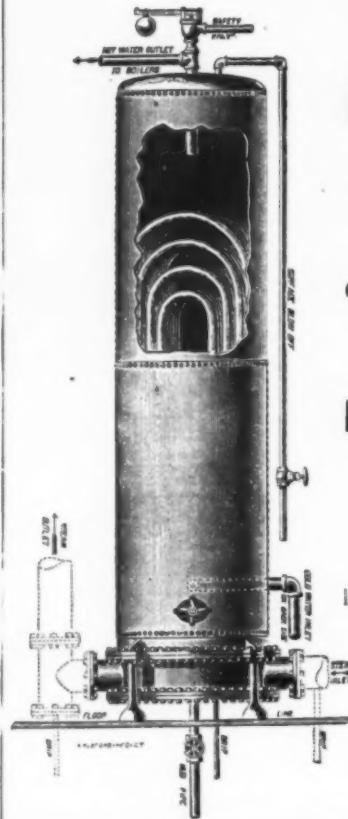
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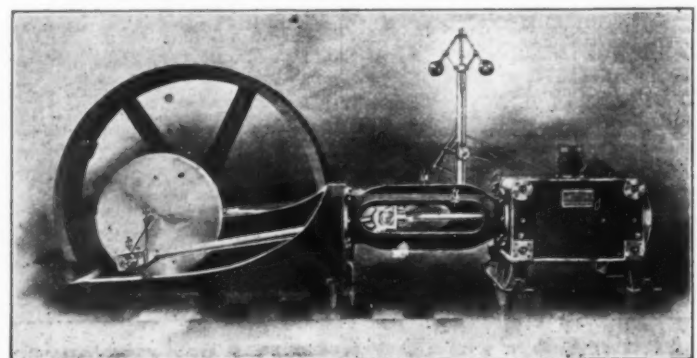
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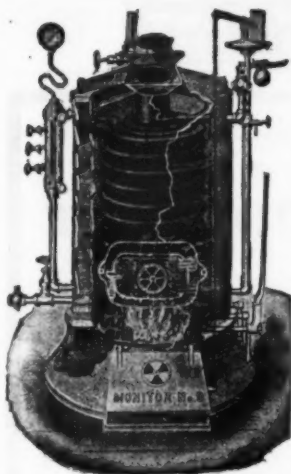
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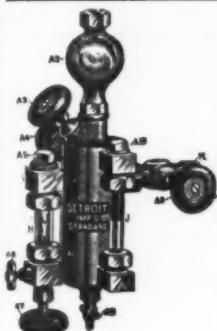
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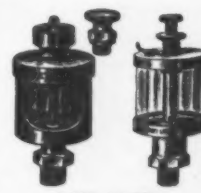
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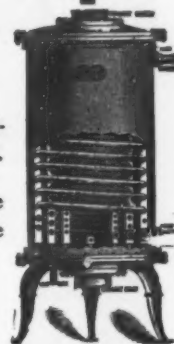
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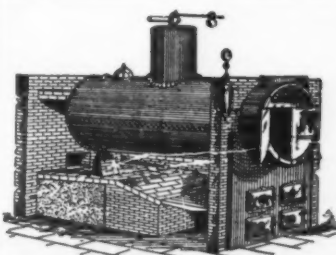
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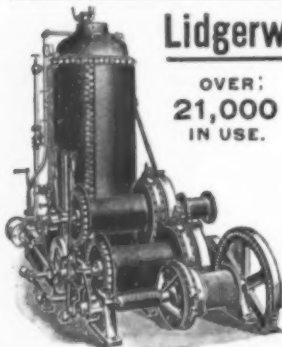
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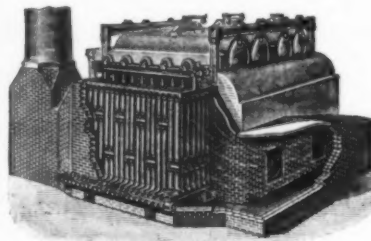
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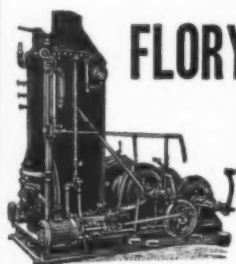
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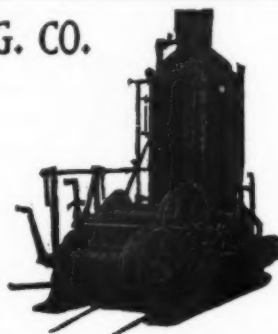
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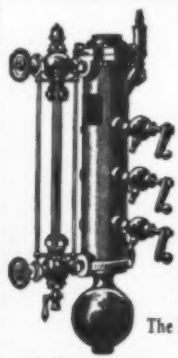
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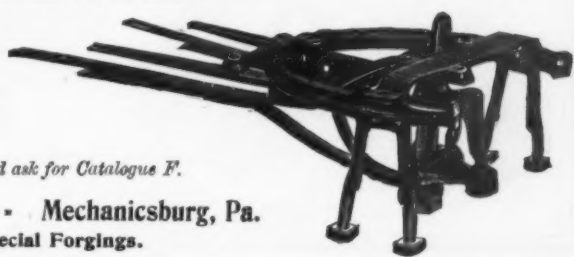
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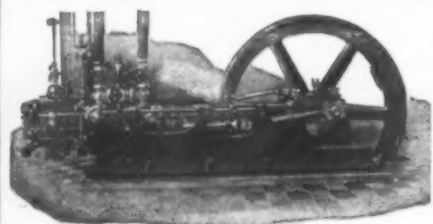
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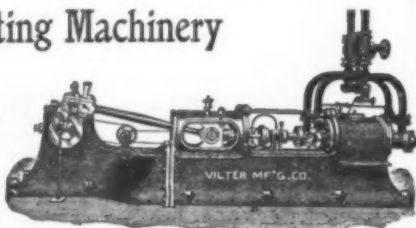
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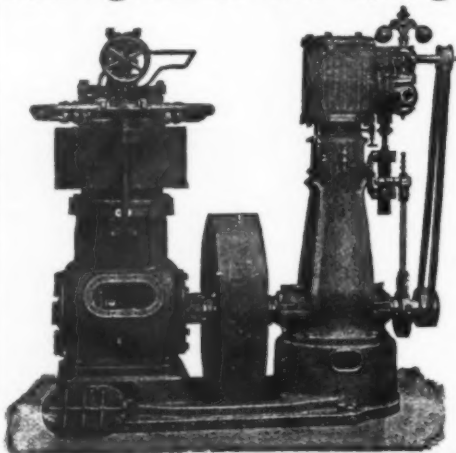
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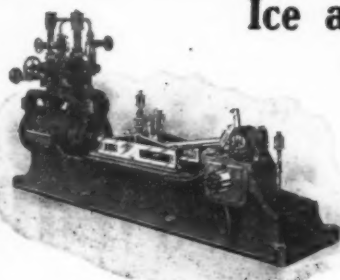
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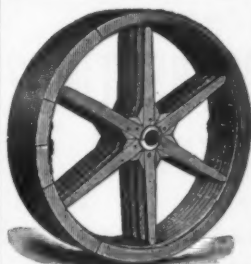
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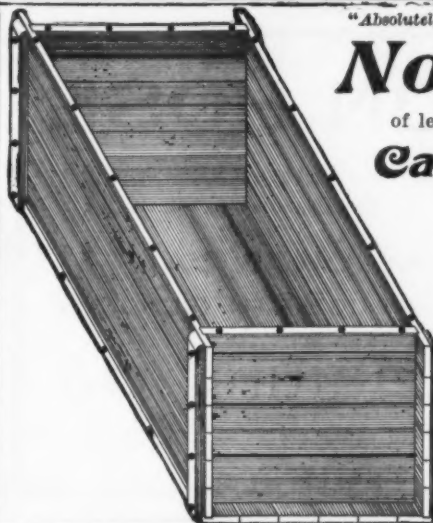
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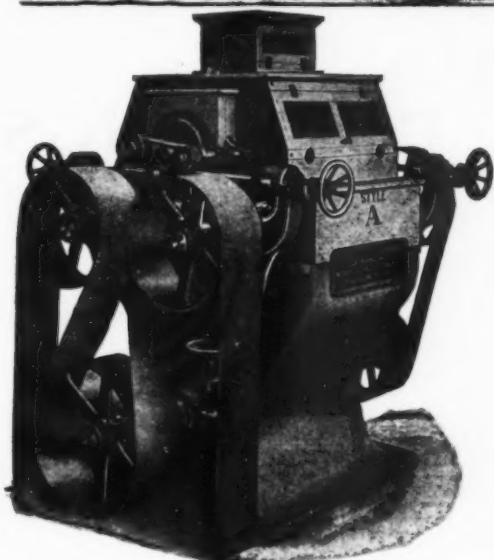
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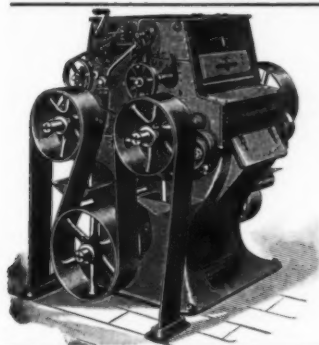
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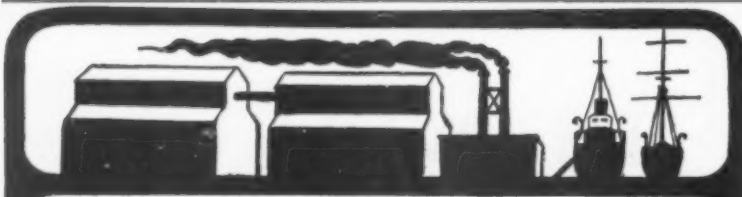
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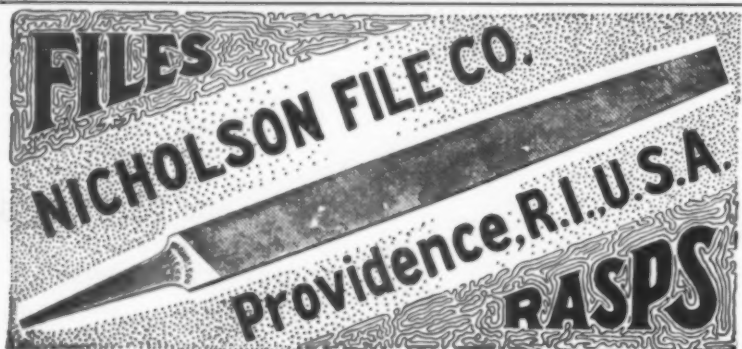
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# MANUFACTURERS' RECORD.

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

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### COPY FOR ADVERTISEMENTS.

Advertising copy (changes or new advertisements) should reach us Saturday Morning to insure insertion in the issue of the following week.

For the first issue in the month we should receive copy by Friday Morning of the week preceding.

THE DAILY BULLETIN of the Manufacturers' Record is published every business day in the year for the purpose of aiding manufacturers and business men generally who need to keep in daily touch with the new industrial, railroad and financial developments of the South and Southwest. Supplementing and in connection with the work of the Manufacturers' Record, it is an invaluable aid to all who are seeking business in the South and Southwest, the most wonderfully endowed section of America, where industrial, railroad and financial activity is creating an ever-widening market for machinery of all kinds, railroad equipment and building supplies, and for financial operations, etc., and where the knowledge and skill of the engineer and expert will find their largest field of operation.

The Daily Bulletin is intended simply to cover every day the work of the "Construction Department" of the Manufacturers' Record in reporting every new mining, manufacturing, railroad and financial enterprise organized in the South and Southwest, and it is not intended to be a general daily newspaper. To all who want to be advised every day of every new enterprise organized in that section it is invaluable.

### THE BURDEN OF VAGRANCY.

Thoughtful men in other Southern States are watching with interest the efforts which Georgia is making to enforce its recently-enacted stringent law against vagrancy. It is a law which appeals to every State between the Potomac and the Rio Grande—a law which should be duplicated in other States if the full benefits of the Georgia legislation are to be enjoyed by the South. A bill providing for such a law has already been introduced in the legislature of Alabama, and the press of that and other States have only to maintain the agitation of the subject which they have strenuously begun to ensure uniformity of action throughout the South. If Georgia remain alone in its position, the curse will only be removed to nearby

States. Citizens of those States, however, will readily impress upon their lawmakers the necessity for prompt action when they perceive the success of the Georgian plan in Georgia and when they come to fully comprehend what vagrancy means to the community. It is not only the fruitful mother of vice and crime, taxing unnecessarily the police resources of the State, but it is a drain in every direction upon thrift and respectability. Vagrants are supported in some way, frequently through mistaken charity, frequently through theft. In either event the shiftless loafers are a drain upon pockets and the endurance of the workers, rendering more difficult the accomplishment of productive tasks and increasing the burden of taxation.

To become most effective, however, the vagrancy law must be supplemented by a law providing for adequate police protection in country districts. Already the drift of vagrants from Georgia cities is noted, and it is not at all unlikely that complaints about them in the country districts will increase unless vagrancy there be suppressed. The remedy seems to lie in the organization of a police patrol somewhat upon the lines of the old patrol before the war, but modified, of course, to meet changed conditions. Such a system would have a deterrent effect of greater value, perhaps, than as a means of bringing criminals to justice. It would reduce the number of potential criminals. The legislative program for Southern States should be a strict vagrancy law, a rural police patrol, and provisions for putting to work and keeping at work, under State authority and for the State, the irremediable vagrant, together with a provision that committal to the penitentiary shall justify a surgical operation removing forever the possibility of the propagation of recognized convict stock.

### WORKING FOR THE SOUTH.

An innovation which ought to have practical and beneficent effects in the movement for immigration to the South was made last week when the Southeastern Railways Land and Industrial Agents' Association held a special meeting at Buffalo, N. Y. Among the members of this association are Messrs. M. V. Richards, president of the organization, land and industrial agent of the Southern Railway; J. E. Ingraham, vice-president, Florida East Coast Railway; F. Y. Anderson, land commissioner Alabama Great Southern Railroad; R. L. Pritchard, land and industrial agent Central of Georgia Railway; S. A. Hughes, general immigration agent 'Frisco system; W. L. Glessner, commissioner of immigration Georgia Southern & Florida Railway; George C. Power, industrial commissioner Illinois Central Railroad; J. F. Merry, assistant general passenger agent Illinois Central Railroad; G. A. Park, general immigration and industrial agent Louisville & Nashville Railroad; Robert Gates, industrial agent for Tennessee of the

Louisville & Nashville Railroad; H. F. Smith, traffic manager Nashville, Chattanooga & St. Louis Railway; Paul Scherer, immigration agent Norfolk & Western Railroad; J. W. White, general industrial agent Seaboard Air Line Railway; M. Schuller, industrial commissioner 'Frisco system; Frank B. West, land and industrial agent Macon, Dublin & Savannah Railway; Wilbur McCoy, industrial and agricultural agent Atlantic Coast Line Railroad; W. S. Erwin, general manager Tallulah Falls Railway; C. E. Harman, general passenger agent Western & Atlantic Railway; W. L. Henderson, land and industrial agent Mobile & Ohio Railroad, and C. C. McMillin, general agent passenger department Georgia Railroad.

This association represents the machinery employed by railroads of the South to make known its great resources and to induce men and capital to join in developing them. While much of the time of the meeting, which is only one of those to be held in the North, was occupied in a discussion of papers bearing upon different phases of agriculture and industry in the country south of the Potomac and Ohio and east of the Mississippi, the chief aim of the meeting was to enlarge in the East and Middle West and in Canada the lines upon which the association is working. The portions of the South served by the railroads represented by it have been receiving considerable immigration from the Northwest, but in other parts of the country comparatively little work for enlarging the movement has been done, and it is hoped that the Buffalo meeting is but the beginning of a strong effort to divert from congested and unattractive portions of the country a thrifty and vigorous class of settlers to the South.

Advertisements of Southern localities offering special advantages for the location of manufacturing enterprises will be found on pages 54 and 55.

### THE SOUTHERN COTTON INDUSTRY.

Exports of cotton during the past fiscal year constituted 23 per cent. of the total exports of the country, and the increase in their value was 65 per cent. of the increase in the total value of the country's exports. To those facts so significant of the importance of cotton in American trade must be added one showing the importance of Southern cotton manufacturing in American industry, to wit, during the crop year ended August 31 the takings of Southern mills were 50.42 per cent. of the total takings in the country. Ten years ago the South's share was less than 31 per cent. of the total. Since that time the consumption of cotton by Southern mills has steadily increased from 718,515 bales to 2,000,729 bales, while the takings by Northern mills have fluctuated from 1,601,173 bales in 1894 to 1,600,271 in 1896, to 2,211,740 in 1898 and to 1,967,635 in 1903.

The growth of the textile industry in

the South is indicated by the following table showing the takings of cotton during the past decade, the figures for Southern mills being those of actual consumption:

Year ended	Southern mills. Bales.	Northern mills. Bales.	Total Bales.
August 31.			
1894.....	718,515	1,601,173	2,319,688
1895.....	862,528	2,063,529	2,946,057
1896.....	904,701	1,600,271	2,504,972
1897.....	1,042,671	1,804,680	2,847,351
1898.....	1,231,841	2,211,740	3,443,581
1899.....	1,399,399	2,190,095	3,589,494
1900.....	1,597,112	2,068,300	3,665,412
1901.....	1,620,931	1,967,570	3,588,501
1902.....	1,837,971	2,050,774	3,888,745
1903.....	2,000,729	1,967,635	3,968,364

These figures are taken from the last annual report of Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, further details of which are published elsewhere in this week's issue of the Manufacturers' Record. They show that with a crop of 10,727,559 bales 6,677,166 bales have been exported, an increase of 36,356 bales, and 3,968,364 bales have been used in this country, a decrease of 20,381 bales. Bearing upon these figures and upon the efforts of so-called statisticians to manipulate the market for lower prices, the following statement by Colonel Hester, who is a statistician, should be well pondered:

Notwithstanding the endless discussion of stoppage of mills, short time and interference with consumption by high prices, American mills have practically used every bale they could obtain, and the limit to their consumption has been due to the scarcity of cotton. This applies to the mills as a whole. In the large number of establishments North and South there have been many exceptions, where short time and partial or temporary suspension has been due to high prices for raw material, without corresponding improvement in manufactured goods. The fact is that so far as domestic mills are concerned, there has not been enough cotton to go round. The season has and has not been satisfactory; most of the mills bought or contracted for their supplies early, and as the rise in prices for raw cotton to nine cents and above did not take place until nearly 75 per cent. of the crop had been marketed, they were actually in excellent shape.

In the South from 100,000 to 150,000 bales more would have been consumed had conditions during the latter half of the season been normal as to supply and price, and in face of the talk of manipulation by speculators, at no time in the history of the staple has values been governed so thoroughly and completely by supply and demand.

The feeling from the start was that even with a crop of 11,000,000 or 11,250,000, every bale would be necessary to fill the wants of consumers and make up for the depleted stocks of cotton the world over at the close of last season. Mill-owners as well as others recognized this, and to a large extent profited thereby.

The rather notable developments of the year have not lessened the faith of the South in its textile future. During the ten years ended August 31, 1900, 327 mills were added to the South's equipment of 336 mills. During the past three years seventy-seven mills have been added, and in the meantime the number of spindles has increased from 6,267,163 in 1900 to 8,248,275 in 1903. In the meantime changes in established factories and the erection of new factories have marked a tendency toward the manufacture of a higher grade of cotton goods in the South, which, if not artificially interrupted,

must bring the South to the position of not only using more bales than the rest of the country, but using them in such a way as to produce goods of a greater total value than those produced in the rest of the country. There are, too, in the South men looking to the time when, with cotton become more and more of a surplus crop, thus inducing independence of market manipulation, the South will be enjoying its liberal share of America's dominance in the manufacture of cotton.

#### WHERE THE NEGRO PROBLEM IS TO BE WROUGHT OUT.

In an astute discussion in the current issue of the Review of Reviews of the race problem in the United States, meaning the negro problem, Dr. Lyman Abbott, seeming to yield much, demonstrates, nevertheless, the inability of most kindly and honest purpose to reach that viewpoint which is a preliminary necessity for the solution of the negro problem. He acknowledges that the peril of white women from a certain class of negroes is real; that we can neither amalgamate nor exterminate the negroes; that the negroes are a separate and distinct race, and that whatever they may come to be in the future, they are today the inferior race; that our fathers did not think that equality meant universal suffrage, and that the permanent provisions respecting suffrage in constitutions recently passed by six Southern States are not unjust. These points are axiomatic. They have long been accepted by everybody except the wilfully blind. To enunciate them is really not setting forth any new proposition, however that enunciation by Dr. Abbott may bear fruit of the proper sort.

Nor will anyone dispute his self-evident proposition that for the solution of the race problem is needed fraternity both between North and South and between black and white, though many persons may read differently from his meaning the concluding sentence of his article:

By just so much as we of the North are richer and stronger than our fellow-citizens in the South, by just so much we owe to them a hearty co-operation in the great problem which is remote to us, but imminent to them; which is a problem to us, but is a life and death struggle to them.

Unconscious cerebration has led Dr. Abbott to repeat in that sentence the expression of the radically wrong impression revealed in his suggestion that the South withdrew from the Union for the purpose of solving the negro problem in its own way and in his assertion that the South is the place "where the problem must be wrought out."

He contradicts himself, too, in stating that "the negro must have the right to the fullest, freest, largest development" in connection with his view that we owe the race primary and industrial education. Dr. Abbott's idea of primary education seems to appear in his statement that 65 per cent. of negroes cannot read and write, though his broader view is had in the following:

Its first and most pressing need is an education which will teach them so to use their hands and their brains that they can earn a living; an education in industry, economy, thrift; an education in those primary lessons which most of us Anglo-Saxons were taught in our great-grandfathers; an education which will impart those virtues which we have inherited from a remote ancestry. . . . If this African race is to live as a separate race; if it is not to be amalgamated, nor to be subjugated, nor to be exterminated; if it is to live here, 10,000,000 people, separated by

race lines from 70,000,000 that surround it, then this race must have its own lawyers, its own doctors, its own preachers, its own teachers, its own authors, its own leaders, and this means higher education for the few as well as industrial and primary education for the many.

Granting that dicta which show that, after all, Dr. Abbott is clinging to some theories which have been discounted by facts, is not the straight way to the solution of the problem marked in his allusion to the education of what he calls "us Anglo-Saxons," a people, as he acknowledges elsewhere in the article, with ten centuries of Christian education behind them, while the negroes, a confessedly separate and distinct race and an inferior people, are but three centuries removed from unnumbered years of barbarism?

The point may become clearer if one should consider the fate of "us Anglo-Saxons" if, upon emergence from barbarism, two generations of us had been subjected to the same kind of education as that which has been forced upon the negro race ever since "conscience and humanity," reinforced by self-interest, as Dr. Abbott says, violently interrupted the natural process of solving the negro problem and thwarted radically the curriculum which had in two centuries changed the negro from a barbarian into a productive and valuable element in American life. The education of us Anglo-Saxons, which has taught us industry, economy and thrift and given us ability to use our hands and brains in earning an honest living, came first through bondage, but developed into potent good not through the application of any theories about the "elder brother" or about the debt of a "richer and stronger and wiser" race to one coming out of barbarism, but through the unaided and oftentimes resisted efforts of the race itself against tremendous odds. In these efforts grew distinctive race traits; in them were nourished self-respect and self-reliance, which are still notable in spite of the cultivation in recent years of the degenerate notion that men may look outside themselves for help in education.

The career of the negro has been just the reverse of all that. One of the greatest curses inflicted upon him has been the training predicated upon the theory that the negro is but a white man with a black skin, the training of him to look to the white race for his education, and the training that education implies necessarily ability to read and write. For his relief no Southern Educational Conference, no revival of Blairism is needed. The first essential is that the negro be thrown upon his own resources, and be allowed to work out his own destiny, as he is doing in thousands of instances, and to solve his own problems, just as was the task of us Anglo-Saxons centuries ago. When that fact has been beaten into the brains of "philanthropy" a great gain for the negro will have been made and philanthropy will be ready to recognize that because of the horrible mistakes of malevolence, supplemented by the terrible blunders of benevolence, the place where the problem must be wrought out is outside the South.

Southerners will gladly co-operate with their fellow-citizens elsewhere in this working out. They will suggest, first, that for the especial benefit of the negro a public sentiment be cultivated giving him in all parts of the country the right to "the fullest,

freest, largest development," at least equal to that now enjoyed by him in the South, and second, that a public sentiment be developed making it impossible for pothouse politicians and editors and Bourbon philanthropists to have a hearing for their exploitation of the negro for party purposes or personal gain. These things accomplished will find the negro living without diminution of numbers as one to seven or eight of the population, instead of as one to one or one to three, will prevent an utter destruction of the fraternity between the black and white which still persists in the South to some degree, in spite of the demoralization from outside interference, and a fraternity stronger than ever of the South for the North, a fraternity qualified and glad to help the North solve the social problems now menacing it.

Dr. Abbott says that there is "a noisy, though not very influential, minority in the South who wish to keep the negro ignorant." It might be well for him to know that there is a noisy, though not very influential, minority in the South who will support any lagging scheme for education of the negro by outside help as long as the "philanthropy" is eloquent with funds. But as long as that spirit is cultivated, just so long will the proper education of the negro be neglected and the solution of the negro problem be postponed.

#### THE COTTON OUTLOOK.

Cool heads in the South are slow to come under the bear influence in the cotton market of the government crop report showing the condition of the crop on August 25. They are beginning to understand the wide ramifications of the bear movement which is bound to develop at the opening of every cotton year with the intent of lowering the market through a sudden rush of cotton to sale. Farmers, who are the principal victims of bear raids, are inclined to give some heed to the observations of such a careful student of the situation as Mr. A. S. Johnston of Meridian, Miss. It will be remembered that last September Mr. Johnston estimated a crop of possibly 10,900,000, and certainly 10,750,000. That his forecast was practically correct was shown by the actual figures of the crop, 10,727,000. Under date of September 1 this year he writes "that since August 20 considerable deterioration had been noted in the crop in nearly all sections, the crop having made rapid and favorable progress during July and up to August 20." He adds, referring to the possibility of an early frost:

Should such an unfortunate disaster overtake the crop between the 5th and the 15th of October, the yield will be disappointingly small and the total crop nowhere near the consumptive power of the spindles.

Guesses or estimates as to size of crop at this season of the year are absurd and ridiculous, but with late frost, no further deterioration and good gathering season, it is not unreasonable to expect 11,000,000 to 11,500,000. Neither one of these figures would be excessive, and it will be an extreme case should the crop prove about 11,500,000. It is doubted by many well-posted authorities whether 11,500,000 can be gathered, as so much labor in recent years has left the farms, seeking employment in cities.

To sum up the situation, the writer does not hesitate to say it is critical and alarming. Increasing consumption, practically no supply on hand, a yield not exceeding 11,250,000, price already at figures which spinners claim are on a losing basis to them, there would be only one conclusion to draw, viz., a stoppage of many thousand spindles.

Spinners ought not to allow extravagant crop ideas promulgated by people interested in depressing prices to again mislead them, as they have so successfully done for past

few years. It is not probable the farmer will hurry his product to market, as he is in better shape financially than for years. With this idea in view, together with lateness of crop and strong active demand, it is not amiss to predict the smallest September movement for years, and prices that will be satisfactory to the farmers.

In the meantime it is interesting to note that on the day when the publication of the government crop report sent September options in New York down to 11.12 cents spot cotton sold in Augusta, Ga., at 12½ and 12½ cents a pound, and that the report of Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during the first four days of the season was 10,283 bales, as against 113,563 during the same period last season.

The Shelby Electric Co. of Shelby, Ohio, writes to the Manufacturers' Record as follows:

We have been advertising our Useful Light type of incandescent lamps for the past eight years, and during that time we have tried many mediums, among them being trade journals, our lamp being especially adapted for mill and factory use. Some time ago we placed an advertisement in your Daily Bulletin, and we are pleased to advise you that the results we have obtained from it exceed those obtained from any other source of trade-journal advertising we have tried to date. The business we are obtaining through this advertisement is not confined to any particular part of the country. We are surprised to note that inquiries are coming in from New England, as well as from the Pacific coast, that are directly traceable to the Daily Bulletin.

#### A Notable Development.

In the Southern textile world there have frequently been many instances of notable progress by individual concerns which illustrate the growth of the industry as a whole. Some of the largest of Southern mills have advanced from very small beginnings, in many cases the increases made having been paid for in whole or in large part from surplus earnings. One of the most notable instances of this kind is presented in the completion of the Brookside Mill No. 2 at Knoxville, Tenn. Ten years ago this plant had but 5300 spindles and 176 looms, but its trade increased steadily and additional capital was invested from time to time until early in 1902 the plant had about 26,000 spindles and 650 looms. It was then realized by the owners that further extensive enlargements were required in order to meet the demand for its product, which continued to grow rapidly, and to take care of new markets becoming available. Plans were then decided on for expending about \$500,000, and contracts were awarded for the addition which is now about finished. This addition brings the equipment up to about 60,000 spindles and 1300 looms, with space remaining for increasing further to 90,000 spindles and 2000 looms when trade conditions warrant that installation.

These mills are designed for odd goods, covering a wide range, and spin from 5s to 50s yarns. This notable development in the Southern textile industry is but another indication of what manufacturers in the cotton-growing States are doing to keep pace with the increase in consumption of cotton goods.

#### For Investors in Clay.

E. B. Rembert, president Timpson Coal Co., Timpson, Texas, in a letter to the Manufacturers' Record writes:

"We notice that you have in your paper some space devoted to undeveloped resources of the South and their fine openings for capital to invest in. We have near our town a large deposit of what has been proved by test to be the finest



clay of its kind in East Texas, and will make brick equal to the Coffeyville, Kan., brick, fine sewer pipe and all kinds of pottery. It glazes perfectly. There is an unlimited quantity of cheap fuel at the clay deposit in the shape of wood, though we have an unlimited supply of lignite that is cheaper than wood. We would like to get in touch with some party or parties whom we could get interested in the brick business, and think we could put them in position to make a fine and good investment and have a large business in a short while. If you can get us in touch with anyone we will appreciate it, as the only thing lacking here is capital enough to put in a plant of the size that the deposit justifies."

#### Launch of the Cruiser Maryland.

Many Baltimoreans will witness on September 12 the launching at the yards of the Newport News (Va.) Shipbuilding & Dry-Dock Co. of the United States armored cruiser Maryland. Miss Jennie S. Waters, daughter of Gen. Francis E. Waters of Baltimore, will christen the vessel. The Maryland, which is a duplicate of the West Virginia, launched last spring, has a length on load water line of 502 feet, the extreme beam is 69 feet 6½ inches, and full-load displacement, all ammunition and stores on board, 15,104 tons. Its designed indicated horse-power is 23,000, and its speed twenty-two knots. The vessel will have two sets of vertical inverted triple-expansion direct-acting propelling engines, each engine in a separate water-tight compartment. Steam at 250 pounds pressure will be supplied from sixteen water-tube boilers of the Babcock & Wilcox marine type, and arranged in six water-tight compartments. An armor belt will extend five feet below and four feet above normal load line from stem to stern. The main battery will consist of four eight-inch breech-loading rifles, mounted two in each turret on the center line of the vessel.

#### Galveston's Pluck Rewarded.

On September 8, 1900, Galveston, Texas, was swept by a hurricane which slew not less than 6000 persons and destroyed more than 3600 buildings, entailing a property loss of \$30,000,000. That was three years ago, and the spirit which brought Galveston from wreck is shown by the fact that during the past year the city's bank clearings were \$413,185,000, an increase over the preceding year of \$40,946,200, and the value of goods handled on its wharves was \$447,910,707, an increase of \$201,343,461. There were 1340 vessels, with a tonnage of 3,094,903, entered or cleared at the port, an increase of 208 vessels and of 871,975 tonnage. The port has many lines of steamships to foreign ports, two regular coastwise lines to New York and nine to Gulf ports, and during the past year work has been pushed upon the Galveston channel, the depth of which is to be increased from twenty-seven feet to thirty feet, with a width of 1200 feet. Upon harbor and other improvements there have been spent during the year \$2,019,420, while there is still available for government, seawall and private improvements more than \$5,000,000.

#### Labor for the Rice Fields.

Mr. J. R. Leguenece, secretary of the Abbeville (La.) Progressive League, says that labor in the rice belt will be in very heavy demand until the completion of the rice harvest. Ordinary labor is paid \$1.25 a day with board, but even at that figure planters are finding it a difficult matter to secure the necessary number of hands. It is stated that proper and thrifty workers can secure profitable employment for the next three or four

months, with a promise of permanent work. Agents are scattered through the surrounding States in an effort to get men, and the railroad lines have decided to run cheap excursions in order to induce a movement of labor from the North and West. It is not at all unlikely that such labor, being thus acquainted with the excellent opportunities, will become a permanent element of the population.

#### Montgomery's Power Equipment.

In a review of the industrial advance made by Montgomery, Ala., during the past year Mr. L. L. Gilbert, secretary of the Commercial and Industrial Association, notes the erection of woodworking and chemical plants, giving employment to hundreds of men, and the impetus derived from the appearance on the first of January of 5000 horse-power of electricity transmitted from the Tallassee falls, thirty miles distant. The purpose of the company developing that power is to arrange for an especially low rate to manufacturing enterprises, and Mr. Gilbert believes that the coming twelve months ought to show material response to that opportunity. He suggests among the industries which would undoubtedly pay at Montgomery furniture, trunk, wagon, split-pulley, spoke and handle, shoe, jug and earthenware factories and a cannery; in short, any factory employing as raw material cotton, hardwoods, pine, clays, iron or coal, which would enjoy at Montgomery cheap and contented labor, artesian water, equitable laws and reasonable taxes.

#### Basis of Houston's Growth.

To the oil industry, the rice industry and the lumber industry, with improved facilities for transportation, the Post of Houston, Texas, attributes recent manufacturing activity in that city, and the prospects of greater development in many lines. With fourteen railroads operating in and out of the city, it is expecting within the coming year five more, in addition to two suburban lines. Since 1890 the assessed valuation of Houston property has increased from \$12,888,518 to \$31,985,830, and during the past year the increase in bank clearings has been \$105,636,678. In the near future the city is to expend \$1,000,000 in street paving, sewerage and schools.

#### Manufacturer Wants Location.

Southern cities and towns possessing advantages as a location for manufacturing plants transacting a foreign as well as a domestic business are offered an opportunity to secure an industry now seeking site. The enterprise in question is projected by a manufacturer who at present has a large foreign and domestic trade in command, and wants to establish his plant at some point where inducements in land and buildings can be obtained. Information regarding this project can be obtained by addressing "Manufacturer," care Central National Bank, Washington, D. C.

#### Tennessee Phosphates.

The phosphate men in the Columbia field have decided to arrange for an exhibit at the World's Fair at St. Louis of the phosphate industry of Tennessee. Originating about ten years ago, this industry has developed from a production of less than 20,000 long tons in 1894 to 420,000 tons in 1901, and though production has been retarded this year, the field's possibilities are shown in the fact that there are phosphate deposits in twenty-seven counties of the State, and with an area of 2800 square miles.

It is estimated that 800 dwelling-houses were built in Memphis during the past year.

## PROSPERITY OF THE SOUTH.

### How Lectures on the Negro "Problem" May Hamper It.

[Editorial Correspondence Manufacturers' Record.]

Atlanta, Ga., September 4.

Just now the South is raising a paean of praise of W. P. Brown and his associates in the bull campaign in cotton, for the effect of their work has been to awaken the world to the actual shortage in cotton, the realization of which insures high prices to the planters for this year's crop. But for Brown's work it is quite probable that, as has often happened before, there would have been no advance in price until the crop was out of the hands of the farmers, and then the speculators and the mills, instead of the growers, would have made the big profits from the advance. Brown did not destroy a single bale of cotton, nor has he locked it up where it cannot be had. The shutting down of mills is due to the actual shortage in the cotton supply, and the bull operators only brought the condition to public knowledge. Even though they had never been heard of, there would not have been cotton enough to go around, and many mills would have had to close down awaiting the coming of the new crop. Some mills, tempted by high prices, sold their cotton rather than manufacture it, and this cotton has been resold by Brown to other mills. So great is the influence of the cotton mills of Europe and New England that all possible pressure has been brought against high prices, for the cotton manufacturer is necessarily a bear on prices. Low prices for the raw staple mean larger profits for the mill, and Europe and New England, which consume 80 per cent. of the South's cotton crop, holding no interest in this section other than to buy cotton at the lowest price, fill the world with exaggerated reports about the danger of cotton-growing in other countries, about the prospects of large crops and of production exceeding the demand. This is an old game played for many years to the great loss of the South. For once, however, Southern men have met the bears of Europe and America, and in the greatest cotton battle of the world's history have come out victorious. The South at least does not begrudge them the vast profits which rumor says they have reaped, for their work has made it quite certain that this year's cotton, including the seed, will bring to this section more than \$100,000,000 in excess of the largest amount ever received for a single crop. It is conservative to estimate that the growers of cotton will receive not less than \$600,000,000 for this year's crop, while as late as 1898, under the exceedingly low prices then prevailing, the value of the crop, including seed, was less than \$350,000,000. That was the lowest point reached, and then came a gradual increase which made the average of the last three years about \$500,000,000, to be followed now by a record-breaker of \$600,000,000 and possibly more. Estimating this crop at \$600,000,000, the total value of the last four crops, seed included, has been about \$2,200,000,000, while the total value of the four preceding crops, seed included, was about \$1,600,000,000. Let us take this year's crop at \$600,000,000. Of this, the South will consume in its own mills over 2,000,000 bales, and in doing so will add to the value of the raw staple about \$200,000,000; the value of the cottonseed-mill products will add another \$100,000,000, so the South will this year have poured into it entirely from other sections and other countries for cotton products alone about \$900,000,000.

Moreover, added to this magnificent showing for cotton is the grain crop, which likewise promises to be the best the South ever had. Here and there are found sections where grain has not done well, but for the whole South the yield will be surprising to the most sanguine. Wherever you meet Southern people, whether in New York, which is crowded with them, or at home, the talk is of universal prosperity. "We are going to have so much money we will hardly know what to do with it" is the substance of what has been heard from many leading Southern men during the last few days. The value of agricultural products in the South other than cotton will exceed \$900,000,000 this year, or a total to the credit of the work of Southern farmers of \$1,500,000,000, against \$600,000,000 in 1880. Since 1880 the South has increased its population by about 50 per cent., while it has increased the value of its agricultural products by 150 per cent. During the same period it has developed the value of its manufactured and mineral products from \$474,000,000 to about \$1,700,000,000, or a gain of 258 per cent. Taking agriculture, minerals and manufactures together, and the gain has been from \$1,074,000,000 to \$3,200,000,000, or 198 per cent., against 50 per cent. increase in population. And yet some Southern people—just a few—talk about the South not making much progress.

At Chicago the other day John Temple Graves of Atlanta, editor of the Atlanta News, which heralds him in big type as "statesman, orator and publicist," a heavy combination for any poor mortal to stagger under, painted a gruesome picture of the sad reign of poverty and lawlessness throughout the South. "Orating" as statesman and publicist and journalist on his hobby of the separation of the races, he must perforce give reasons therefor, and his fundamental reasons were that because of the presence of the negro the South could not thrive. Clothed in the choicest English, of which he is a master, with glowing oratorical flights, his speech might charm the ear, but fortunately for the South, his premises were all wrong. Referring to what he calls the negro "problem," Mr. Graves said:

"To the white men of the South the problem hampers its material development. It halts our growth. By the records of the census, it frightens immigration from industrial competition with the negro. It largely deters capital from investment in the shadow of an unsolved problem. It makes a standard of labor that prejudices all our Southern poor against menial but honorable service. It depresses agriculture on the farms and property in the suburbs, and drives all who can afford the change to the safety afforded by proximity and police protection in the cities. The South is unequalled in the four great basic raw materials of coal, iron, cotton and lumber. And yet, while \$100,000,000 of our money goes yearly to Europe at 4 per cent., these great fields are scantily developed. And thus, while one great section of our country is halted in development, the free movement of men and money in all sections is hindered toward the inviting field of opportunity."

How often must the story of the South's amazing progress be told? How often must the facts be given to show a

redemption from the poverty following the wreck and ruin of the war, unparalleled in history? In agriculture and manufactures the South, despite all its burdens, all its false teachers, has in twenty years made a greater percentage of progress than the country at large. Since 1891, when it had less than 2,000,000 cotton spindles, it has increased its cotton mills by over 6,200,000 spindles, giving it now a total of 8,250,000 spindles, while during the same period England added only 1,650,000 to its 45,000,000 spindles, and New England added only 1,800,000 spindles to its 13,250,000. England and the North combined had in 1891 58,000,000 spindles, which they have since increased by 3,300,000, while the South had less than 2,000,000 spindles, which it has since increased by 6,200,000.

What has been done in cotton has to a considerable extent been done in lumber, coal and iron. Since 1880 the South has increased its pig-iron production from 397,000 tons to over 3,000,000 tons, reaching this year probably about 3,500,000 tons; it has increased its coal output from 6,000,000 tons to over 60,000,000 tons; its exports from \$261,000,000 to \$510,000,000. In 1880 it had 20,600 miles

of railroad, now it has about 60,000 miles; then it had \$23,500,000 capital invested in lumber operations, now it has \$181,700,000, and the value of its lumber products increased from \$39,900,000 in 1880 to \$188,000,000 in 1900. And yet Mr. Graves talks about the South not progressing.

In the light of such figures, which are open to the world, how utterly absurd seem the statements made by Mr. Graves. The fact is, starting with his false premises on the industrial line, he has largely overdrawn the conditions. He has painted a picture of the South which is not true, but it is a picture which will be distributed by Northern and Western railroads seeking to keep immigration from the South by the hundreds of thousands of copies, if not by millions. Europe, the North and the West will be flooded with it to prove that white people must not go South. His speech will counteract the good work of a hundred railroad immigration agents, for, false though it be, it will be distributed as the views of a Southern man. From beginning to end Mr. Graves' new things are not true things, and his true things are not new things.

RICHARD H. EDMONDS.

## THE TEXAS-LOUISIANA OIL FIELDS.

[Special Correspondence Manufacturers' Record.]

Beaumont, Texas, September 5.

A personal survey of the Texas-Louisiana oil fields demonstrates that nobody knows what is going on here. The outside world has only the most hazy idea of the true situation—wells being drilled in a hundred locations and the production of the field for two months past running between 100,000 and 150,000 barrels of crude petroleum per day, while the development in every direction is proceeding so continuously that even those on the ground who try to keep in touch with developments claim nothing more than an approximate knowledge of the situation.

The world-famed Spindle Top, which set the speculating public all agog, making fortunes for a few, but proving a veritable Golgotha of dollars for the masses, has settled down to a plodding gait, wholly lacking in spectacular features, and for a year the hundred or so wells which have continued as producers—pumping propositions, all of them, except for an occasional spasmodic gush, lasting a few days, when a new well is brought in—have gone along with a daily production of something between 10,000 and 20,000 barrels. Contrasting this with the spouting geysers of the early days, when one well would throw out as much as 70,000 barrels a day, this is a beggarly display. And a visit to the fields reveals the departed glory of that camp, acres of dead derricks and rows of vacant stores and shacks giving their silent testimony to the change. All over the field there are wells pumping, and as all the pioneer territory has not yet been drilled, new wells are going in from time to time. But in the old field, where derrick stands to derrick so thick there is not an inch of space between, almost the last drop of oil has been pumped from below, and derrick, pump and casing, representing an investment of anywhere from \$10,000 and \$25,000 to each well, stand as monuments to the vastness of the activity that once was. Here and there rigs and machinery, and even casing, are being pulled up and taken down for shipment to the new field, the present Eldorado of the oil men—busy, uproariously busy, hustling Sour Lake—where a regular mining camp of 10,000 people has appeared in two months' time, and where there has been since July a

production of from 50,000 to 100,000 barrels of oil a day.

These contrasts, and, still more, the fact that the outside world poured millions into oil-company stocks, many of the companies being capitalized at wholly absurd figures, are responsible for the popular impression that Beaumont has died and the oil business played out. The truth is the oil business here was, at the height of the excitement, another tulip-bulb craze. The oil is all right, just as the tulip bulbs were, but neither could stand the capitalization the enthusiasts piled up.

There have been produced in the Beaumont field—Spindle Top—something like 18,000,000 to 20,000,000 barrels of oil since the date of the Lucas gusher, January 10, 1901, and there is small doubt that Spindle Top will be a producer for years to come. Had the field been in the hands of a few strong interests—oil men who knew the problems of storage, pipe lines and tank cars, and who would not have sunk well after well simply to form the basis for a stock-jobbing operation, taking no thought of the relations between supply and demand—the field would have lasted many years in a much larger way, the oil would have been produced only as there were facilities for handling it and opportunities for making sales, and on the whole the results would perhaps have been more generally advantageous and profitable to all concerned in the industry.

But, wasteful as the methods have often been, possibly the present stage of development of the industry would not have been reached had any other course prevailed. Speculators rushed in where old oil men hesitated to act, with the result that facilities for handling and marketing the oil were created by the very necessities of the case. When the Lucas gusher first came in there was no possible way to market the oil, and there was no market for the oil, even could it have been transported. There was not a single barrel of tankage, no tank cars, and, of course, no pipe lines. Now there are about 12,000,000 barrels of steel tankage in Texas and Louisiana and over 5,000,000 earthen tankage; there are nearly 150 miles of pipe line; there are refineries, among the largest and most complete in the world; there are tank steam-

ers and barges to carry oil to coastwise and foreign ports, and the market for the oil includes railroads of the South, steamships and factories almost the world over. A splendid system for handling and disposing of the oil has been built up, so that the industry has become permanently one of world-wide importance. Furthermore, a demonstration has been made of the vast extent of the oil territory, and prospecting is now going on at scores of places along the coastal plane of Louisiana and Texas. As an indication of present activity and facilities, in the sixteen days from August 13 to August 28, inclusive, the shipments of Beaumont and Sour Lake oil from Port Arthur amounted to 357,123 barrels, and from Sabine Pass 144,970 barrels—a total of 502,093 barrels. These figures surpass any previous record of shipments by water within a like period. The bulk of the shipments were of crude oil. On August 15 the schooner C. H. Moore took 212 barrels of lubricating oil from the Colonia refinery at Port Arthur to New Orleans. The same vessel carried thirty-two barrels of asphaltum. The J. M. Guffey Company tanker Winifred loaded 2000 barrels of lubricating oil for New York on August 24. Additional shipments by the Guffey Company included 147,523 barrels of crude, of which 68,369 barrels went to New York, 40,464 barrels to New Orleans and 38,690 barrels to Philadelphia. The same company shipped 40,806 barrels of solar oil to Philadelphia and 22,619 barrels of solar oil to New York. All Guffey shipments were from Port Arthur.

The Standard Oil Co.'s steamers and barges loaded 87,024 barrels of crude at Port Arthur for New York and 72,190 barrels of crude at Sabine Pass for New York. The Texas Company loaded 56,907 barrels of crude at Port Arthur for New Orleans; the Sun Company 49,006 barrels of crude at Sabine Pass for Philadelphia and Marcus Hook, and the Higgins Oil & Fuel Co. 23,684 barrels of crude for Louisiana points.

The rail shipments from Beaumont and Sour Lake during the same 16-day period were approximately 400,000 barrels, the bulk of which went to the Southern Pacific Railroad from Sour Lake. The Southern Pacific is filling its storage tanks in Texas and Louisiana, the stores of oil in which had become considerably reduced, and with this object in view is largely neglecting the shipment of commercial freight into Sour Lake.

I will devote separate chapters to the situation at Beaumont, with its vast refinery and pipe-line interests, and to Sour Lake and Saratoga, which are the present great centers of production. In this article I will deal with the situation in the Louisiana fields as it was a few days since on the occasion of a visit to them. In any oil field conditions are likely to change from hour to hour, so that the statistics of today may become inaccuracies by tomorrow; but, all the same, facts of last week will give a fairly good idea of the situation in general as it exists today in any but an unusually active field, and the present comparatively low price of oil has considerably checked the development work in all the fields, some to a greater extent than others. Thus while wells are being put down all over the known and suspected oil territory of Texas and Louisiana, there would be a much greater activity had the price of crude oil remained at the high figures of a few months ago.

The greatest development in Louisiana is in the Jennings field, where there are over thirty producing wells, with a total output of some 8000 barrels a day. A dozen other wells are now being drilled, several of which are being bailed out and are expected to be brought in soon, and

there are some ten others which will become producers when cleaned out. All of these wells are pumping propositions. There was one marvelous gusher brought in a year ago which ran as much as 200,000 barrels in a day through a pipe line. It was capped on account of inability to take care of the enormous output, and then, as frequently happens, the gas pressure subsided, and this well became an ordinary pumping proposition. It is declared that no "dusters" have been brought in here, although there are occasional salt-water wells, some of which run as low as 20 per cent. oil. The Jennings oil is somewhat lighter than the Texas, being about 25 gravity, and is lacking in sulphur and poisonous gases, so that there have been no casualties to workmen about the wells. It is claimed that as a steam producer it is about 25 per cent. more effective than the Texas oil, and that in refining there is a loss of only 1 per cent. The wells here are deep, averaging about 1850 feet, and it is the belief that on this account, and from the conduct of the wells which have been producing for a year or more, the field will be one of great permanence. The present pioneer territory is about one-half by three-quarters of a mile in extent. Three or four wells are being drilled near by, and if they come in, the field will be extended three-quarters of a mile farther. This field is some five miles north of Jennings. Prospecting is being done five miles south of Jennings, and also between Jennings and the present field, and a contract has been let for a well northeast of town. There are quantities of gas south, east and north of Jennings, and it is an evident axiom that no one can tell whether there is oil there until they go after it.

There has been no great excitement over the Jennings field, no companies with great capitalization, and the wells are not being drilled on every inch of available space, as on some portions of Spindle Top. Real estate is changing hands to some extent, the outright purchase plan, instead of the leasing system, as in Northern oil fields, having apparently secured a permanent hold in the South, but the highest price recorded is \$25,000 an acre in the proven field. Land adjoining the proven ground has reached the limit of \$10,000 an acre. There has been no sale of producing wells.

Operators in this field are mostly from Pennsylvania, West Virginia, Ohio, Indiana and California, and are oil men of experience. Crowley people are largely interested in the Jennings, or Mamou fields, as they are called sometimes, owning five of the producing wells there. Companies have also been organized to drill in several directions around Crowley. The Crowley Oil & Mineral Co., very strongly organized, proposes to build a pipe line from the fields to Abbot, thirteen miles, and a local company is being organized to complete the line from there to Crowley. The company is now building a large storage tank.

Facilities for taking care of the Jennings production furthermore include an eight-inch pipe line five and one-quarter miles long, owned by the Southern Oil Co., extending from the field to the Southern Pacific tracks at Mermentau, where there is a loading rack of twenty-six cars capacity. The Heywood Bros. & Jennings Oil Co. has a four-inch pipe line to Jennings, and each of these companies has two 38,000-barrel storage tanks at the railroad. The Southern has a branch pipe line one and one-half miles long to its refinery at Jennings, operated under the name of the Union Refining Co. This refinery, which cost \$85,000, has three 500-barrel stills, giving a capacity of 1500 bar-



rels a day, and is soon to begin regular operations.

From this showing it will be seen that although not developed on the scale of the Beaumont field, yet the Jennings field is provided with very complete facilities, and is in shape to handle an increased production as it may be brought about.

A considerable amount of money has been spent in development work at Welsh, ten miles west of Jennings. Friends of this field declare their faith in the future importance of Welsh, but so far it seems to be largely a matter of faith. Some ten wells have been sunk, four of which are producing, though not heavily. Prospecting still continues there.

A well is being sunk at Rayne, nineteen miles east of Jennings, and the presence of gas in that section leads to the belief that oil will be encountered. The citizens of Rayne, through their Progressive Union, have offered as an inducement to further prospecting a bonus of \$1500 to the first man who brings in an oil well there.

The Heywood Brothers, who were early in the Beaumont field, and who were pioneers at Jennings, have done a good deal of pioneering elsewhere. They are heavy and successful producers and pipe-line op-

erators, and are active in every promising field. At Anse-la-Butte, near Lafayette, they have three producing wells, two of them 600 feet deep and the third 1050 feet. The total yield of the wells is from seventy-five to eighty barrels a day. They are drilling another well and express confidence in a satisfactory development here. The Southern Pacific, which is drilling in several of the promising fields, is putting down a well here; so is the Morisi syndicate, local, and a company of New York capitalists. J. T. Chadick, a California oil man, has started a well 600 feet north of the proven field. Gen. Nelson A. Miles and ex-Governor Hogg not long since bought a large tract of land near the proven field, though they have not yet begun drilling.

There was talk some time since of excellent oil "symptoms" at Bayou Bouillion, where gas bubbled above the surface of the ground at a very lively rate. The Heywoods accordingly sunk a well there. They spent \$12,000 in putting down a first-class well and were rewarded for their money and their pains by tapping a strong vein of superheated salt water, which proves that even in their breeding grounds feathers are not always sure signs of a duck's nest.

ALBERT PHENIS.

## FOR THE EXPANSION OF AMERICA'S COAL TRADE.

By F. E. SAWARD.

[Written for the Manufacturers' Record.]

There is always something to note in regard to the progress of this country or certain parts of it in the matter of coal output. I was very forcibly struck by this in reading over a statement made about twenty years ago by H. M. Chance, who was on the Pennsylvania Geological Survey. He was of the opinion that our output of bituminous coal might by 1910 reach the total of 200,000,000 tons; that Pennsylvania might get up to 70,000,000 tons, though he feared the growth in West Virginia would cut this to about 58,000,000 tons. The fact remains that in 1902 Pennsylvania had grown to 98,000,000 tons, while West Virginia had increased from about 2,000,000 tons to 25,500,000 tons in the same period, and the country's output to 254,000,000 tons. Verily, all the prophecies in regard to our country are of little moment. We move at a pace which is beyond the wildest dreams of many persons who do not come in contact directly with our industrial matters. No one conversant with the facts can gainsay this statement, and there is much for us to do along the same lines.

As our production of coal increases we will naturally have something over and above home requirements, and there will be an opportunity to send coal abroad, but we should prepare it better. There is an evident and appreciable distinction between the French and American conceptions of what each considers equivalent terms. The result was that on receiving United States coal at Marseilles it was considered inferior to English coal sold under the same categorical name, the reason being that American exporters did not endeavor to maintain the relative proportions of large and small. This will be given due and proper care in the future, and we should have a trade to Mediterranean ports. Within the past month I have had many inquiries from abroad. This shows that interest is again awakening, and as our prices are getting down to normal we ought to be in position to do business again. I have always been a firm believer in the possibilities of shipping our coal to the continent of Europe.

Another market which is surely open

to us is that of Mexico. The largest users of coal in Mexico are the railroads and industrial centers. Little or no coal is used, nor is it a necessity, in the homes of the Mexican people. The requirements are purely along the lines of securing cheap coal for manufacturing purposes. These requirements make the question of supplies an important one to almost every new undertaking. At present the principal quality of coal used is medium-grade bituminous steam coal. The grades imported into Mexico are Pocahontas, McAlester, I. T.; Fairmont, Davis, Alabama, New Mexico and Texas. The coals of the Southwest reach Mexico by rail, but the Northern coals of the United States are shipped largely from the Eastern seaboard to Tampico. Prices of coal range from \$3.75 to \$4.75 per ton at Laredo to \$15 and \$20 in the more inaccessible places. The average price at El Paso is from \$5 to \$7 gold. Belgium, Germany and England have been making efforts to introduce coal into Mexico, but with little success, as the American coal of the same quality has been more successful on account of the economy derived from the short haul.

There are new concerns opening up territory in West Virginia, and this coal will be wanted when it is ready, for as the old mines are worked out there must be new ones opened, for coal does not grow again; there is no new crop on the old ground, as in corn or cotton. Even on the Kanawha this is true, and therefore one need not be surprised to learn that such an extensive concern as the Marmet Company has recently acquired another big tract of coal lands on the Kanawha river. The last purchase is 1000 acres in extent and lies seventeen miles from Charleston. The newly-acquired land is only a few miles from the purchase of the company in that vicinity made a year ago. The latest deal includes many coke ovens, and the concern will be in shape to do an extensive business in that line.

The coal roads are getting in shape to do an increased business, as there is likely to be a very active trade this fall and winter. Baltimore & Ohio Railroad officials report a large quantity of coal be-

ing moved and that the company's facilities for handling the coal are better than ever before. They say there are more cars and locomotives in use than at any other time in the history of the road, and there is absolutely no danger of a short supply by reason of the road not being able to move the product from the mines to the market. The Norfolk & Western has far outgrown the possibilities of a single-track road, and to meet this new condition a considerable amount of double-tracking has been done. Simultaneously with the progress of this work changes in alignment are being made. Curves are being taken out and grades cut down and the whole road is being whipped into such shape as will enable the handling of maximum trainloads at the minimum of expense. This will mean large dividends later on, but for the present it seems to be considered that the interests of stockholders can best be served by putting earnings back into the property.

Now that there has been a settlement of the wage question in Alabama, one may expect to see a larger output of coal. It is expected that the demand for coal will continue to improve until there will be need for more than can be gotten out. It is feared that another car shortage is going to be on this coming winter which will cause iron and coal prices both to go up. The coal production in Alabama today is greater than it has been in four months. Preparations are being made to increase this quantity already, the Pratt Company soon to be in a position to have a daily output, and on a large scale, of coal from its mines in Jefferson county. The Bessemer Land & Improvement Co. will also be ready to mine coal from recently-opened mines on a large scale in the next few weeks. The Southern Railway will build a 12-mile extension in Bibb county to reach some undeveloped coal fields, and in return there will be big development.

Settled labor conditions in Alabama will be productive of further development there. One of the results of the award by the wage-scale arbitration commission made itself manifest when it was stated that Pennsylvania coal operators were looking out for a place for the location of a large mine. As soon as the award was announced a representative opened negotiations for any available lands that might be found. As soon as the location is selected one of the largest mines in the district will be opened. It is stated the eagerness with which both sides agreed to arbitration of their difficulties had its weight in determining the investment of considerable capital in the Birmingham district. It was one of the clever things that work was not suspended while the matters in dispute were under investigation. This most reasonable condition surely reflects great credit upon all persons concerned or connected in any way with the coal industry of Alabama.

One of the interesting features of the recent month in trade circles has been the blowing in of the new furnace of the Alabama Consolidated Coal & Iron Co. In addition to its furnaces, coal mines and ore mines, the company is also an extensive manufacturer of coke, with ovens at its plant in Tuscaloosa county, as well as at Lewisburg, near Birmingham. The coke plants are so conveniently arranged that the furnaces are supplied with it at a minimum cost for haulage, and the company gets the full benefit of this economical arrangement. With the coke ovens now building the company will soon have 800 in operation. The bodying up of the properties of the company has been one of the most marked characteristics of the management and has served to create the present success which it enjoys. The president, Col. T. G. Bush, has been a

conspicuous factor in these achievements, and under his capable direction the Alabama Consolidated Coal & Iron Co. has attracted the attention of the entire industrial world, as well as earned handsome dividends for the stockholders, these dividends being paid regularly every quarter.

### A \$10,000,000 Coal Company.

Announcement is made of the completion of plans to develop about 400,000 acres of coal lands in the Big Sandy river section of Kentucky. The Great Northern Coal & Coke Co., chartered recently with a capitalization of \$10,000,000, has purchased the property, and will arrange for immediate development. The Great Northern Company will own the lands, several companies will be organized to operate the mines and coke ovens, a transportation company will be formed to conduct the railways, and a selling company will market the coal and coke. Each will be a separate corporation with different officers. The selling company will have its headquarters at Cincinnati, Ohio, and the parent company will have its offices in New York. The properties are about ninety miles from Maysville, Ky., and a railroad will be built to transport the coal to that point, where will be erected two immense coal tipples equipped with the latest improved machinery for unloading from the cars to barges. The promoters of the Great Northern Coal & Coke Co. are ex-Senator Camden and Sprigg Camden of Parkersburg, W. Va.; P. L. Kimberly of Sharon, Pa.; F. A. Dinley and Robert Newton of Chicago; George C. Howe of Duluth, Minn., and J. C. Mays of Paintsville, Ky.

### Cotton in Texas.

Mr. M. Holderman, manager of D. June & Co., manufacturers of engines, boilers and saw mills, Waco, Texas, in a letter to the Manufacturers' Record, writes: "The farmers are better supplied with feedstuffs than they have been in years, which is a big item in this country. The cotton crop is still uncertain. Two weeks ago it looked as if we were going to have a very large crop, but boll weevils and worms have destroyed a large percentage of the crop. Where two weeks ago the indications were that we would get on an average three-fourths of a bale to the acre, at the present time it seems that a quarter of a bale would be a good estimate. At the same time the plant is in a healthy condition, and if the insects will let up within a week or ten days we still have a chance to make a big crop. This being the case, the conditions in this country will be the best ever known in consequence of the higher price of products generally grown in this section. It is fair to say that the country is in much better condition, notwithstanding the cotton crop, than it was three years ago or since."

In connection with the coming meeting at Baltimore of the League of American Municipalities, the Municipal Journal and Engineer of New York devotes more than ten pages to a description of Baltimore with special reference to its street-cleaning, garbage-collecting, conduit systems and fire department.

The commandant of the Pensacola navy-yard has recommended that Congress be asked to appropriate \$1,400,000 for the construction of a concrete and granite dry-dock at the yard, in addition to \$1,145,515 for other improvements, including a central power-house, a shop and office building and a quay wall.

## AMERICAN COTTON CROP IN 1902-1903.

By COL. HENRY G. HESTER, Secretary of the New Orleans Cotton Exchange.

The cotton crop of the United States for the year ending with the close of August amounts to 10,727,559 bales, showing an increase of 46,879 bales over that of 1901-1902, an increase over that of 1900-1901 of 344,137, and over that of 1899-1900 of 1,291,143.

The increase of the crop was in the "Other Gulf" States, the production of which was 10.57 per cent. more, while Texas (including Indian Territory) was 5.41 per cent. less, and the Atlantic States dropped off 3.62 per cent.

Compared with last year, in round figures, Texas, including Indian Territory, has decreased 162,000 bales, the group known as "Other Gulf" States, consisting of Louisiana, Arkansas, Mississippi, Tennessee, Oklahoma, Utah and Kansas, has gained 363,000, and the group of Atlantic States (Alabama, Georgia, Florida, North Carolina, South Carolina, Kentucky and Virginia) has fallen off 154,000.

While the crop as a whole brought a good return, notwithstanding the high prices during the latter part of the season, the outturn has not been as great as was expected. The total value carefully figured out is \$42,755,595 above last year, but it is less than year before last (when the crop was 344,137 bales under this year) by \$13,797,267.

The cause will be made apparent when it is stated that in the crop of 1900-1901 September averaged 10.3 cents per pound, and that from October to February the monthly averages ranged from 9.59 cents in October to 9.21 cents in February, or, stated in bales, from \$52.17 in September to \$47.52 in February.

This year the range from September to January (average monthly values) was 7.83 cents to 8.61 cents, the price of 9 cents not being touched until February, when nearly 8,000,000 bales of the crop had been marketed, the monthly average sales of which were from \$40 to a little over \$44 per bale.

Another important feature that affected values more or less was the results of the unusual and long-continued rains, which reduced the grade of the Texas crop and of the section tributary to New Orleans.

Investigations at New Orleans, Galveston and Houston show an average of one-quarter grade under last season.

Houston says "the picking in Central and North Texas in the latter part of the picking season was of such a character that the oil mills refused to buy the cottonseed, and that south of Waco produced a lower grade crop than for years."

Savannah, Charleston and Memphis were more or less affected, but not to as great an extent, the average reduction in grade for the entire crop having been from a sixteenth to an eighth.

A fair average of price for the United States is 8.82 cents per pound, comparing with 8.06 cents last year, 9.93 the year before and 7.65 for 1899-1900, the highest price touched during the season having been 13% and the lowest 7%.

### Value of Commercial Crop.

The average commercial value per bale of the crop is \$44.52, against \$41.01 last year, \$47.63 the year before and \$38.55 in 1899-1900.

The total value of the crop compared with the previous five years is as follows:

	Bales.	Values.
1902-1903.....	10,727,559	\$480,770,282
1901-1902.....	10,680,680	438,014,687
1900-1901.....	10,382,422	494,567,549
1899-1900.....	9,436,416	363,784,320
1898-1899.....	11,274,840	282,722,987
1897-1898.....	11,199,994	330,552,606

When it is considered that the combined values of the past three crops resulted in payment to farmers, common carriers, merchants and other handlers of over \$1,413,000,000, their importance as the great factor in the prosperity of the South may be fully appreciated.

### American Mills.

Notwithstanding the endless discussion of stoppage of mills, short time and interference with consumption by high prices, American mills have practically used every bale they could obtain, and the limit to their consumption has been due to the scarcity of cotton. This applies to the mills as a whole. In the large number of establishments North and South there have been many exceptions, where short time and partial temporary suspension has been due to high prices for raw material, without corresponding improvement in manufactured goods. The fact is that so far as domestic mills are concerned, there has not been enough cotton to go round. The season has and has not been satisfactory; most of the mills bought or contracted for their supplies early, and as the rise in price for raw cotton to nine cents and above did not take place until nearly 75 per cent. of the crop had been marketed, they were actually in excellent shape.

In the South from 100,000 to 150,000 bales more would have been consumed had conditions during the latter half of the season been normal as to supply and price, and in face of the talk of manipulation by speculators, at no time in the history of the staple has values been governed so thoroughly and completely by supply and demand.

The feeling from the start was that even with a crop of 11,000,000 or 11,250,000 bales, every bale would be necessary to fill the wants of consumers and make up for the depleted stocks of cotton the world over at the close of last season. Mill-owners as well as others recognized this, and to a large extent profited thereby.

All of this season's commercial crop with 131,000 additional from last year's reserves has gone to feed the world's spindles, or, in other words, has actually been worked up into yarns and fabrics.

The consumption of American cotton by Northern mills may be put at 2,016,000 bales, against 2,050,000 last year. They took in round figures 1,968,000 and consumed about 48,000 of their stocks at the close of last year, leaving them with a stock of about 75,000 bales. The comparisons for the past two years are as follows (thousands omitted):

	This year.	Last year.
Northern mill stocks beginning of year.....	123	122
Takings.....	1,968	2,061
Supply.....	2,091	2,173
Year's consumption.....	2,016	2,050
Northern mill stocks close season.....	75	123

Making the total consumption of American cotton North and South:

	This year.	Last year.
North.....	2,016	2,050
South.....	2,001	1,988
Total American United States.....	4,017	3,988

An increase for the year of 29,000 bales.

The use of foreign cotton by American mills during the past year has decreased materially. Manufacturers North and South have taken of Egyptian and other importations (mostly Egyptian) the equivalent in American weights of 144,232 bales, against 180,802 last year and 109,941 the year before. Only a small portion was consumed in the South, but the use of Egyptian in the mills adjoining the Southern cotton fields is increasing rapidly, this season's consumption amounting to 9578 bales, equal in weight to 13,858 American bales, against 1640 last year, equal to 2311 American. There are now seven Southern mills in operation using foreign cotton, and three building, a total of ten, against six last year, the total number of spindles being 76,210 active and 19,000 building, in all 95,210, against 57,050 last year.

### Takings of Cotton by American Mills.

The following tables sum up the entire takings and consumption of cotton in the United States:

	This year, bales.	Last year, bales.
Takings:		
North-American.....	1,967,835	2,060,774
Foreign, reduced to equivalent in bales of American weights.....	130,374	178,491
Total takings, North.....	2,098,209	2,239,265
South-American.....	2,000,729	1,937,971
Foreign.....	*13,858	12,311
Total takings, South.....	2,014,587	1,940,282
Total takings, North and South.....	4,112,796	4,169,547

\*9578 actual bales, mostly Egyptian, equal to 13,858 American bales.

†1540 actual bales, mostly Egyptian, equal to 2311 American bales.

The consumption, all kinds, was:

	This year.	Last year.
North.....	2,146,374	2,229,162
South.....	2,015,000	1,939,611
Total consumption, all kinds.....	4,161,374	4,168,773

In the South the phenomenal growth of spindles continues. Not only have the spindles in the mills in operation been increased by 483,461, but my returns show there are actually in course of erection 1,184,245 new spindles, making the total (old, new and not completed in the Southern States) 8,248,275. In addition to this, there are a number of new mills projected in the Southern States which will materialize in the near future.

Annexed yearly figures since 1890 are submitted as of special interest. The column of Northern mills shows "takings," while that of Southern mills comprises actual consumption:

Year ending August 31.	Northern mills. Bales.	Southern mills. Bales.	Total. Bales.	Crop. Bales.
1890.....	1,739,258	546,894	2,286,152	7,311,392
1891.....	2,027,362	604,561	2,632,023	8,652,597
1892.....	2,190,766	686,080	2,876,846	9,035,379
1893.....	1,637,296	743,848	2,381,134	7,700,365
1894.....	1,801,173	718,515	2,519,688	7,549,817
1895.....	2,083,829	862,838	2,946,677	9,901,251
1896.....	1,600,271	904,701	2,504,972	7,157,346
1897.....	1,804,680	1,042,671	2,847,351	8,757,964
1898.....	2,211,740	1,231,841	3,443,581	11,199,994
1899.....	2,190,056	1,359,336	3,549,494	11,274,840
1900.....	2,068,300	1,597,112	3,665,412	9,436,416
1901.....	1,967,570	1,620,931	3,588,501	10,383,422
1902.....	2,050,774	1,937,971	3,988,745	10,680,680
1903.....	1,967,655	2,000,729	3,968,384	10,727,559

It needs but a glance at these figures to show what the Southern manufacturers are to the cotton market and the influence they exert. Thirteen years ago the North took 76.7 per cent. and the South 23.3. Today the percentages are—North 49.58, South 50.42. "And the trend of the spindle continues southward to the near neighborhood of the cotton field, where, within a few years, the largest percentage of the entire crop will be worked into yarns and fabrics."

### An Abnormal Feature.

An unusual feature of the year's movement has been the return of American cotton from abroad for delivery on contracts in New York and New Orleans. The total thus received amounted to 42,376 bales, including 37,383 reported at New York, 4026 at New Orleans and 367 at Burlington, Vt., embracing, say, from—

Liverpool.....	34,751
Havre.....	1,386
Bremen.....	5,106
Genoa.....	766
British North America.....	367

Total American returned..... 42,376

It is needless to say that this return of American cotton in no possible way affected the "net" receipts at ports or the crop total.

Referring to details given below, which include a slight revision of last year's total, the consumption of American cotton on both sides of the Atlantic and across the Pacific during the past year has been 10,850,000, against 10,657,000 last year and 10,171,000 the year before.

### American Cotton Crop for Four Years.

(Year Ending Close of August.)

	1902-1903.	1901-1902.	1900-1901.	1899-1900.
Port receipts.....	7,724,104	7,679,250	7,666,452	6,734,364
Overland to mills.....	1,083,383	1,103,963	1,140,237	1,161,189
Southern consumption.....	2,000,729	1,937,971	1,620,931	1,597,112
Less taken by Southern mills from ports.....	10,808,216	10,721,214	10,427,630	9,492,665
	80,657	40,534	44,198	56,249
Total crops.....	10,727,559	10,680,680	10,383,422	9,436,416
Exports:				
Great Britain.....	2,851,528	3,035,497	3,063,828	2,338,550
France.....	785,679	745,969	729,013	703,962
*Continent and Channel.....	3,039,959	2,859,344	2,746,917	2,907,580
Canada.....	123,677	122,261	162,535	109,951
Total exports.....	6,800,843	6,763,071	6,641,281	6,060,043
Stock close of year.....	162,040	164,773	240,534	88,132
Northern mill takings.....	1,967,835	2,050,774	1,967,570	2,068,300
Average gross weight of crop per bale, pounds.....	508	508.43	516.28	504.12

\*Including Mexico, Japan and China, details of which are given in Export Table.



## COTTON CONSUMPTION OF THE SOUTH.

Census of Southern Mills, Made Up From Actual Returns of the Mills, by Mail and Telegraph, for Year Ending Close of August, 1903.

Notwithstanding the abnormal conditions which prevailed during a considerable portion of the year, the actual consumption of cotton by mills in the South has been the largest yet recorded, the total for the first time passing the 2,000,000 mark, and practically "tied" the mills north of Mason and Dixon line.

As stated elsewhere, the South's consumption this year would have reached 100,000 to 150,000 bales more than it did had the shortness of the supply and consequent high prices not interfered during the last half of the season. It was simply a question of not "enough cotton." As it was, however, most manufacturers bought or contracted for the principal part of their supplies early, before the great advance, and of the 640 active mills on the list, 534 ran during the entire year, though some of them to a greater or less extent curtailed their consumption.

The facts show that up to the close of June the mills had taken something like 200,000 bales more than up to the same time last year, and it was this that enabled them to tide over the period of absolute scarcity which prevailed during July and August, whereas last year they were enabled to supply considerable of their wants during those months. As it was, however, for want of cotton or inability to secure it unless at prices entailing heavy losses, 442,546 spindles were stopped altogether during the month of June, 615,683 during July and 1,035,986 during August. These figures refer to active mills in the South only, not including the 174,576 spindles which from various causes did not run during the entire year.

Of the active mills there were entirely shut down during all of August in—

Alabama.....	8
Georgia.....	20
Kentucky.....	5
Louisiana.....	1
Mississippi.....	2
North Carolina.....	26
South Carolina.....	14
Tennessee.....	18
Texas.....	6
Virginia.....	6
Total.....	106

In addition to these, a number ran on more or less short time. Included in the 106 are the three mills of the Pacolet Manufacturing Co., three mills of the Clinton Manufacturing Co., and the Mary Louise Mills, all of South Carolina, partly destroyed in a flood in the Pacolet river early in June, embracing 79,044 spindles entirely wrecked and 80,992 spindles rendered temporarily useless.

The total consumption of the South for the year was 2,000,729 bales, against 1,937,971 last year and 1,620,931 the year before—an increase of 62,758 over last year and of 379,798 over the year before.

The feeling in favor of the erection of new mills is, if anything, greater than ever before, the record showing new mills and spindles in process of erection in every Southern State but Arkansas and Missouri. Large additions are being made to old concerns, the total of new spindles to be installed being 1,184,245, many of which may come into play at some time during the coming season; in fact, with all the new spindles completed, the South's capacity, on the basis of this year's average weight per bale, as given by the Southern mills, and pounds consumed per spindle, will be nearly 2,368,000 bales.

I desire to emphasize the fact that there has been no guesswork in this report. The list of mills in the South was made up after many weeks of patient and careful investigation, by correspondence in every State and by comparison also with the publications of the "Textile World" and "Blue Book," just issued, both of which are considered standard authorities as compilers of mill directories, so that I have had the benefit of their investigations as well as of my own experience of many years in locating the mills. Every mill in the South has reported but two small concerns, their combined consumption not reaching 2500 bales.

In reference to the increase of spindles, it is interesting to note that South Carolina alone is building new mills and adding to old concerns over 571,000 spindles, and North Carolina 294,000.

How the cotton-manufacturing industry has advanced is best told by the following showing. The yearly net additions are now mills, less deductions on account of burnt, dismantling, etc.:

Total mills in the South consuming raw cotton September 1, 1890 (old, new and not complete).....	336
1890-91, net additions.....	4
1891-92 ".....	16
1892-93 ".....	17
1893-94 ".....	17
1894-95 ".....	49
1895-96 ".....	40
1896-97 ".....	7
1897-98 ".....	9
1898-99 ".....	59
1899-1900 ".....	113
1900-1901 ".....	25
1901-1902 ".....	28
1902-1903 ".....	24
Total mills in the South consuming cotton (old, new and not completed), September 1, 1903.....	740

An increase since 1890 of 404 mills. I have used the words "mills consuming cotton" because there are factories known as woolen mills, each consuming considerable raw cotton annually, and which naturally are classed as cotton consumers.

In this connection the record of spindles since 1860 may prove of still more interest:

1860.....	296,359
1870.....	338,860
1880.....	561,360
1890.....	1,819,291
1895.....	3,177,310
1900.....	6,267,163
1901.....	6,531,894
1902.....	7,512,982
1903.....	8,248,275

Annexed figures show interesting and valuable details, which speak for themselves, viz.:

Total number of mills last year.....	716
Crossed out and merged into other concerns.....	14
New and uncompleted added to list.....	702
Total number cotton mills in the South.....	740

The record of spindles in the South shows:

	This year.	Last year.
Total in operation.....	6,889,454	6,405,993
Idle.....	174,576	110,136
New, not completed.....	1,184,245	996,853
Grand total.....	8,248,275	7,512,982

Showing an increase of spindles, active, idle and not complete, over last year of 735,293, and a net gain of spindles at work of 483,461.

As indicated by the tables annexed, the total consumption in all the mills, old and new, for the year was 2,000,729 bales, against 1,937,971 last year and 1,620,931 for the season of 1900-1901, an increase over last year of 62,758 and over the year before of 379,798. The changes in each State as compared with last year were as follows:

	Gain.	Losses.
Bales.	Bales.	Bales.
Alabama.....	13,793	.....
Arkansas.....	482	.....
Georgia.....	22,829	4,340
Kentucky.....	.....	14
Louisiana.....	4,207	.....
Mississippi.....	384	.....
North Carolina.....	23,814	790
South Carolina.....	.....	1,417
Tennessee.....	6,274	146
Texas.....	.....	1,086
Virginia.....	.....	8,496
Totals.....	71,254	.....
Total net gain.....	62,758	.....

The average consumption per spindle in the mills in operation has been 4.43 pounds less than last year, and .67 more than the year before.

The comparisons for the past eleven years are annexed:

Average Consumption Per Spindle by Southern Mills.	Pounds per spindle.
1902-1903.....	138.44
1901-1902.....	140.87
1900-1901.....	135.77
1899-1900.....	154.58
1898-99.....	162.51
1897-98.....	155.66
1896-97.....	140.66
1895-96.....	142.65
1894-95.....	164.45
1893-94.....	147.60
1892-93.....	169.30

The course of consumption since 1889-90 is shown at a glance as follows:

	Consumption.	Increase.	Decrease.
Bales.			
1889-90.....	546,894	.....	.....
1890-91.....	604,661	57,767	.....
1891-92.....	686,090	81,419	.....
1892-93.....	743,848	57,758	.....
1893-94.....	718,515	.....	25,333
1894-95.....	862,838	144,323	.....
1895-96.....	904,701	41,863	.....
1896-97.....	1,042,671	137,970	.....
1897-98.....	1,231,841	189,170	.....
1898-99.....	1,359,399	127,558	.....
1899-1900.....	1,537,112	177,713	.....
1900-1901.....	1,620,931	22,819	.....
1901-1902.....	1,937,971	317,040	.....
1902-1903.....	2,000,729	62,758	.....

Net increase since 1890 of 1,453,835 bales.

## Southern Cotton Mills in 1902-1903.

MILLS.	Total.	In operation.	Idle.	New, not completed.
		Old.	New.	
Alabama.....	66	50	..	3
Arkansas.....	6	2	..	3
Georgia.....	132	115	..	12
Kentucky.....	9	9	..	..
Louisiana.....	22	17	..	1
Mississippi.....	2	1	..	3
Missouri.....	2	..	..	1
North Carolina.....	267	241	4	6
South Carolina.....	163	141	1	30
Tennessee.....	31	26	..	4
Texas.....	18	15	..	3
Virginia.....	16	12	..	1
Total.....	740	644	6	70
Last year.....	716	636	5	54
Year before.....	688	612	6	43

\*Including ten mills for foreign cotton, seven in operation and three new, not complete.  
†Including mills commenced this year and those under this head last year not yet completed.

LOOMS.	Active.	Idle.	Not complete.	Total.
Alabama.....	14,240	80	2,425	16,745
Arkansas.....	150	73	..	223
Georgia.....	30,318	704	1,696	32,718
Kentucky.....	1,365	..	..	1,365
Louisiana.....	1,672	..	889	2,561
Mississippi.....	3,905	196	275	4,376
Missouri.....	361	..	..	361
North Carolina.....	41,009	213	8,038	49,260
South Carolina.....	68,152	475	12,329	78,956
Tennessee.....	4,450	772	640	5,862
Texas.....	2,072	273	..	2,345
Virginia.....	5,657	482	2,036	8,166
Total.....	171,441	3,267	28,268	202,976
Last year.....	152,963	1,534	28,190	182,687
Year before.....	132,991	2,131	17,881	153,003

\*Includes looms in South Carolina mills that were active until June 6, 1903, when 2795 were destroyed by a flood in the Pacolet river and 2555 rendered temporarily useless.

SPINDLES.	In operation.	Idle.	New, not completed.
	Old.	New.	
Alabama.....	789,384	674,243	6,000
Arkansas.....	30,906	11,658	9,350
Georgia.....	1,570,797	1,266,965	44,064
Kentucky.....	86,062	80,676	6,378
Louisiana.....	101,732	66,762	2,000
Mississippi.....	151,762	130,194	6,400
Missouri.....	14,816	14,816	..
North Carolina.....	2,061,617	1,747,429	13,570
South Carolina.....	3,036,709	2,445,762	17,000
Tennessee.....	263,582	194,286	33,764
Texas.....	96,714	69,632	24,728
Virginia.....	254,194	177,696	17,900
Total.....	8,248,275	6,889,454	174,576
Last year.....	7,512,982	6,397,590	110,136
Year before.....	6,531,894	5,565,652	14,530

\*Exclusive of 95,210 spindles using foreign cotton—say, 4000 active in Alabama, 25,000 active in Georgia, 16,050 active and 14,000 new, not complete, in North Carolina, 25,080 active, and 5000 new, not complete, in South Carolina. This total also includes 160,036 spindles in South Carolina mills that were active until June 6, 1903, when 79,044 were destroyed and 80,992 were rendered temporarily useless by floods in Pacolet river.

†Including spindles added to old mills, less spindles thrown out during year, and new, not complete, mills of last year which started operations this season.  
‡Includes spindles being added to old mills as well as those in new concerns.

### Southern Consumption of American Cotton.

(Year Ending August 31. Actual Figures Reported by the Mills.)

States.	*No. mills.	†Looms.	‡Spindles.	1902.	1901.
Alabama.....	58	14,240	674,248	211,804	198,011
Arkansas.....	2	150	11,656	2,915	2,463
Georgia.....	114	30,318	1,266,865	425,699	402,879
Kentucky.....	9	1,365	30,676	21,366	25,706
Louisiana.....	6	1,672	66,752	18,008	18,017
Mississippi.....	18	3,965	130,194	37,981	33,774
Missouri.....	2	261	14,816	4,723	4,329
North Carolina.....	242	41,009	1,754,221	551,802	528,488
South Carolina.....	140	66,152	2,448,282	613,276	614,065
Tennessee.....	26	4,450	194,386	47,506	45,923
Texas.....	15	2,072	69,682	23,607	17,333
Virginia.....	12	5,657	177,696	42,048	43,963

Totals.....3643 171,441 66,889,454 2,000,729 1,937,971  
 Less consumed and taken from Southern seaports, and included in port receipts.....50,657 40,534

Net consumption to be added to crop.....1,930,072 1,897,437

\*Mills in operation only. For total in South see other table.  
 †Employed in mills in operation. For total spindles in South see other table.  
 ‡Exclusive of seven mills in operation using foreign cotton—one in Alabama, one in Georgia, three in North Carolina and two in South Carolina.  
 §Spindles working American cotton only. For statement foreign see elsewhere.

### United States' Takings of American Cotton.

	1902-1903.	1901-1902.
Total crop United States.....	10,727,559	10,680,680
Stocks at ports beginning of year.....	164,773	240,534
Total supply.....	10,892,332	10,921,214
Exported during year.....	6,677,166	6,640,810
Sent to Canada.....	123,677	122,261
Total.....	6,800,843	6,763,071
Less American cotton returned from foreign ports:		
New York.....	37,383	
New Orleans.....	4,626	
Burlington, Vt.....	367	
	42,376	
Burnt at ports.....	6,758,467	6,763,071
Stock at close of year.....	3,461	4,625
Total.....	162,040	164,773
Total takings for consumption, United States.....	6,923,563	6,932,469
Of which—		
Taken by spinners in Southern States—total.....	3,968,364	3,988,745
Taken by Northern spinners.....	2,960,729	2,960,774
	1,967,635	2,060,774

## PROGRESS OF THE NEW TRANSCONTINENTAL LINE.

[Written for the Manufacturers' Record.]

As is generally known, the Kansas City, Mexico & Orient Railway is now under construction from Kansas City, Mo., across Kansas, Oklahoma, Texas and Northern Mexico to Topolobampo Bay, on the Gulf of California, and it will be the short line from the great middle West to the Pacific coast.

The full significance of this transcontinental project is just beginning to be realized by the business world. As the great enterprise progresses toward completion, and as the future of this vast new field of commerce in the Southwest, in Mexico and the countries of the Pacific opens before the enlightened understanding, one begins to see its almost boundless possibilities. President Roosevelt, when speaking to the people of California lately, declared that the theater of the world's greatest activity in this new century would be in the Pacific and the countries bordering upon that mighty ocean. Let the reader remember that the geographical center of the United States between Maine and California is nearly 200 miles west of Kansas City, at Fort Riley, Kan.; let him bear in mind that the government census of 1900 showed only about 10 per cent. of the nation's population in that western half, although it is now being rapidly populated; that immense areas of cattle and sheep ranges are being converted into farms, and farther West millions of acres, by government aid, will be made fruitful by irrigation; let him remember that an irrigated region will support a denser population than any other—let him dwell upon these and other pertinent facts and he will begin to have a faint idea of the meaning of this new development.

### Allied Lines Around the Earth.

Edward Dickinson, general manager of the Kansas City, Mexico & Orient, has just returned from Europe, where he went some weeks ago with President Stilwell. Mr. Dickinson states that before he left London negotiations were finished by which the Hamburg-American Steamship Co. agrees, upon completion of the Orient road, to put on a line of steamers between its western terminus and Hawaii, the Philippines, China and Japan. The ser-

vice will be extended as occasion requires to other countries of the Pacific.

The Orient road has a traffic alliance with the Missouri Pacific and Wabash lines. It will thus reach the Atlantic, and, in connection with the Hamburg-American steamers across the Atlantic and in the Mediterranean and East Indian service, will complete the circuit of the globe. Then, through the alliance with the Gould lines, the new road will reach nearly all parts of the South, that new-old field which has shown such marvelous development, especially in manufacturing, in the past twenty years. Mr. Gould, the president, and Mr. Harding, the general manager of the Missouri Pacific, are on the Orient's board of directors, along with other men prominent in the railroad world.

The capital of the International, one of the construction companies building the Orient, has been increased from \$7,000,000 to \$10,000,000, and plans made for a direct line to the City of Mexico by building from a point on the main line in Texas to a connection with one of the Mexican roads farther down on the Rio Grande. New interests in France and Holland have lately been enlisted in the building of the road, and its backing is of the strongest character both in Europe and America. The Mexican government has been especially liberal in granting concessions, because the road will open up a region rich in resources, but hitherto almost inaccessible because of lack of railway facilities.

### Interview with Mr. Dickinson.

"We may enter Kansas City next year," said Mr. Dickinson when interviewed. "We are grading now on this side of Wichita towards Kansas City. The line in operation between Wichita and Fairview, Okla., 129 miles, is having all the traffic that it can well care for at present, and it will do a great business this fall when the crops and live-stock are moving freely. The crops in that country are simply immense this year, and it is enjoying the greatest prosperity that it has ever known. Our new line will take many homeseekers into Oklahoma this fall. On our recent excursion, opening

the line to Fairview, we carried 1200 passengers, many of whom went with a view to present a future investment in real estate or business.

"Kansas has broken her record again this year in the greatest wheat crop ever grown in any State, and promises a fair crop of corn. Hay and forage crops are abundant. The same reports come from Oklahoma and Texas. The great Southwest is growing as it has never grown before, and the railroads cannot meet the demands made upon them at the present time. As soon as the completed portions of the Orient road are put in operation they will have all the business that they can handle. We go through a country that only needs railroad facilities for still more rapid development.

"In Mexico prospectors are busy all over our field locating or buying mineral claims to be opened up as soon as the road gets there. Many mines now dependent upon burro transportation for getting their ores to a smelter will multiply their output as soon as the railroad is within reach, and will ship the low-grade ore that is now thrown away or left on the ground. The possibilities of mining development in Northern Mexico

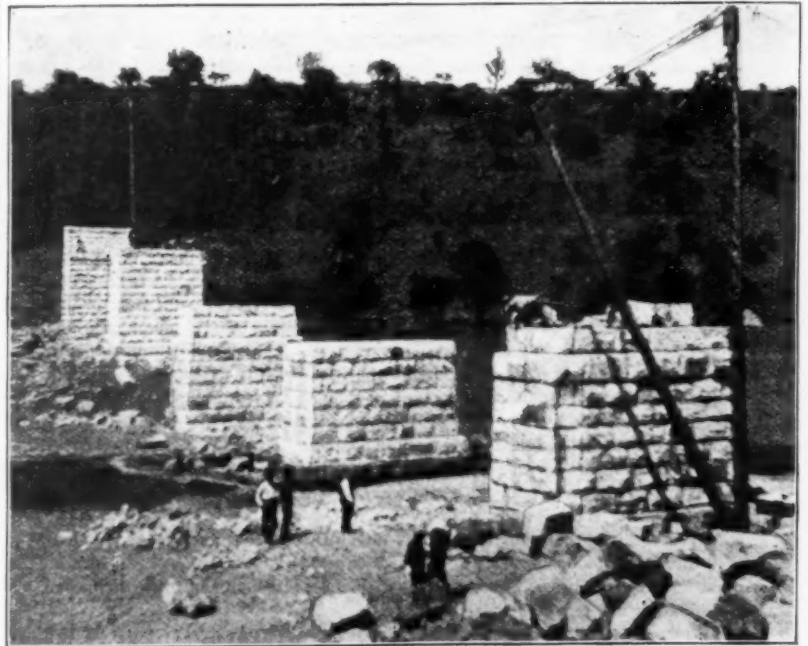
tained, one-half of the grading completed, 350 miles of road in operation, including 125 miles of the Chihuahua & Pacific already built; contracts made with the Western Union for complete telegraphic service and the American Express Co. for express service, while, in addition to the Hamburg-American contract, the railroad company has its own line of coast steamers, which is already in operation from its port between Guaymas and Mazatlan."

### Chief Engineer Paret Talks.

M. P. Paret, chief engineer of the Kansas City, Mexico & Orient, has just returned from a tour of inspection along the line from Kansas City to the Pacific coast. Mr. Paret spent three weeks in the saddle in Mexico and made a thorough examination. He expresses himself as greatly pleased with the work of the field engineers and contractors.

In speaking of his trip the chief engineer said:

"Our engineers have made 5000 miles of surveys in locating the line of 1630, and I think have located the most advantageous route that could be found between the Missouri river and the Pacific coast. In the mountains we do not ex-



BRIDGE WORK ON THE K. C. M. & O. RY. IN THE SIERRA MADRE MOUNTAINS OF MEXICO.

are beyond calculation. Then the timber, the fruit-growing, the ranching and farming interests awaiting development there—well, our trouble will not be to get business, but to take care of it.

"Look at the situation in Kansas City today. The managers and superintendents of all these lines gathered here to confer with our business men and determine what can be done to relieve the freight congestion. Grain for Kansas City is being refused by some of these lines until their tracks can be cleared. Everyone admits that the transfer and track facilities at this great railway center are inadequate to meet the growing demands of trade. The outer-belt line, to be built in connection with the Orient road, will do more than anything else to relieve this situation. We mean to push it as much as possible along with the other work in hand, but we cannot do everything at once. Our energies are distributed over a wide field. When one stops to think of it, the results accomplished since Mr. Stilwell mapped out this great project, three years ago or less, are simply marvelous. A transcontinental line has been surveyed and located, the greater part of the right of way ob-

ceed out estimated maximum grade of 2½ per cent. We have no long tunnels to make and no very expensive bridges. The grading between Wichita, Kan., and Sweetwater, Texas, 430 miles, is almost finished. Tracklaying has reached Fairview, Okla., and will proceed south from there. Material has been shipped to Sweetwater, Texas, for laying track north from there to the Red river.

"In Mexico we have fifty kilometers in operation east from Chihuahua towards the Rio Grande. West of that city we have the Chihuahua & Pacific, which will form a link in the through line and is now in operation. From Minaca, its present terminus, we have graded forty kilometers and work is well under way on the next thirty-five, while a section of fifteen kilometers more is just being opened up. The masonry is completed on the first section and well advanced on the second. The last preliminary lines have been run by the engineers, working from both sides of the Sierras. We pursue what is called a high or ridge line across the mountains instead of following the valleys and the watercourses. This will be a great saving in tunnel and bridge work, obviate danger from washouts and make opera-



tion of the road easier. The two engineering parties working west and east towards each other made a remarkable showing. When they met in the mountains the level of the two lines "tied up" only about eighteen inches apart in elevation on the same ridge.

"On the west coast the road has been completed and put in operation from the port of San Blas, about seventy-five kilometers, and the grade is made for fifty kilometers more. When we reach the mountains, about 200 kilometers from the coast, there will be a heavy traffic in ore and other freight from and to the mines. Meanwhile we shall have good business as far as the line is opened, for it saves that much of the haul by pack-mules and wagon train. Located along the Fuerte river are extensive fields of sugar-cane, corn, beans, etc., which furnish freight to the road now.

"I am more and more impressed by the prospects for business on our line every time I go over any portion of it, and I scarcely know which promises better, the local or the through business to the Pacific. It will be immense when developed, and it will be good all the way. We pass from the north temperate zone nearly to the tropics, and include in the range of products almost everything in the vegetable, mineral and animal kingdoms. If there were space, it would be interesting to note here just the names of these products. Much of this field is developed, more or less, already, but, taken as a whole, only the beginnings have been made. The marvel to me is that this short way to the Pacific has not been opened before."

#### STILWELL A DIRECTOR.

President Diaz Invites Him to the Mexican National.

A dispatch from Houston, Texas, reports that President Diaz of Mexico has requested President Arthur E. Stilwell of the Kansas City, Mexico & Orient Railway to represent the Mexican government on the board of directors for the Mexican National Railway, and that Mr. Stilwell has signified his intention of accepting. The widening of gauge on the Mexican National Railway will, it is further reported, be entirely completed about the middle of October, and it is said that standard-gauge trains will then be run via Laredo to the City of Mexico. The line has also been shortened. A dispatch from Austin also reports that the Mexican International and the Mexican National will be consolidated on October 1, making a system of 2057 miles. The "Orient" is to be connected with it via Spofford Junction, Texas.

#### PIPE LINE COMPLETED.

The Standard Oil Co. in Kentucky and Tennessee.

[Special Cor. Manufacturers' Record.]  
Barboursville, Ky., September 5.

The announcement is now made that the Standard Oil Co. has completed its Kentucky and Tennessee pipe-line system. When the extent of this system and the roughness of the country through which it passes is taken into consideration, together with the difficulty experienced in securing the proper material for the lines, its completion this early is regarded as marvelous.

The line begins at Riverton, Fentress county, Tennessee, which is the Bob's Bar development. It goes on a straight line from there to Somerset, Pulaski county, Kentucky, cutting through Sunnybrook and Slickford, and having lateral branches to the Beaver creek development and the Cooper districts in Wayne county. This section of the line has been built for a few years. The extension goes west from Somerset, through Laurel county

and into Manchester, Clay county. From this line an extension goes into the Knox county fields, having its terminal at Barboursville. Northeast from Clay county the line continues, touching the northern boundaries of Perry and Leslie counties, and continuing through the southern end of Breathitt county to Sublet, in Magoffin county; thence it proceeds through Johnson county, and from there on through the southwestern end of Lawrence county directly through to the West Virginia line.

From the Magoffin county point a branch extends north into the Bath and Rowan county developments. Floyd and Knott counties already have a pipe line. It begins on the northern boundary of Knott county and extends north to Floyd and Johnson counties to the Whitehouse development. This branch will be extended to connect with the main line.

The total cost of this system, which has been completed in less than a year, will be considerably over \$1,000,000, and altogether it covers nearly 270 miles of country, some of it extending through the roughest sections of the mountainous region of Kentucky.

When the announcement was first made that the Standard had decided to build a pipe line to furnish an outlet for the oil output of Kentucky and Tennessee many thought the situation did not justify the construction of the line as a business proposition, but foresight probably disclosed what was coming. At that time there were but two real developments in the State of Kentucky, with a few producing wells in Tennessee. Knox county, Kentucky, was just beginning to take a place in oil production, and up in Bath county a few scattering developments had been made. However, soon after the announcement, renewed interest began to be manifested in all sections through which the route of the proposed line extended. Wildcaters began to flock in, important extensions to the developed fields were made, and a number of the more venturesome wildcaters entered territory many miles apart from development and opened up new fields. The Standard entered the field as a producer and secured vast acreage, and in some instances bought out the holdings of other companies.

Pending the completion of the pipe-line system the Standard erected a number of large steel storage tanks in the various developments in which the oil might be stored as it was produced. All that were stationed in the southern part of the field have been filled for some time. In the central developments there are still a number of unfilled tanks, and into these the oil will be run until the pipe line has received a thorough test. As far as the Licking river the line is in perfect condition, but tests have not yet been made from there on to the West Virginia line. This will require several days' time, and the date for running the first oil through to the refineries has not been announced.

The prices the oil output of Kentucky and Tennessee will command when it is placed on an equal basis with the grades from the older fields is causing some speculation among operators. Some think the completion of the line and the transporting of the oil from this field to Parkersburg, W. Va., will signalize advances in the prices, while others think, in view of the expense the Standard went to in the construction of the line, the present prices will remain in effect, advances or decreases being made in accordance with the rise and fall of prices in the older fields. Again, it is claimed that the grade of oil from this field is inferior to the product of the older fields. However, an analysis of oil from the Whitehouse development of the Standard in Eastern

Kentucky and the Lacy and Somerset grades of the southern fields of the State prove them to be the same in quality, but the Whitehouse product commands now \$1.26 a barrel, which is more than is paid for the Ohio and Indiana product, while the Somerset and Lacy oil commands but ninety-nine cents a barrel. The Somerset and Lacy oil represents by far the greater part of the output suitable for illuminating purposes, the Whitehouse product being very limited. This output is the result of the Standard's own operations, and it is claimed by some that this is the cause of the higher price paid for that grade of oil, but this is hardly probable. The Whitehouse oil is shipped in tank cars at present.

Since the route of the pipe-line system was first planned several extensive developments have been made in various parts of the State, and the operators in these sections are now clamoring for pipe lines. A survey for a line to the Whitley county fields has already been made and the construction work will begin very soon. The most promising field without pipe-line facilities is that of Cumberland county. A large number of big wells have been drilled in, some of them showing an initial daily production of as much as 100 barrels. The Standard evidently has faith in that field, as it has had a number of rigs at work for some time and has contemplated the building of a line. However, not until the past few days have the other operators in that field taken decisive measures toward the establishment of the line. Just as soon as they would show enough oil on the surface to justify the extension of the line the Standard promised the line would be forthcoming. Last week all the operators met and decided to put all the wells to pumping regularly. W. S. HUDSON, Breckinridge Building, Danville, Ky.

#### THE BIRMINGHAM DISTRICT.

Conditions in the Various Industries Centered There.

[Special Cor. Manufacturers' Record.]  
Birmingham, Ala., September 7.

The week opens with a fair demand for all grades of iron, with the buyer of small lots paying practically the list price for it. There are rumors, however, that some sales of rather larger proportions are going for a little less money, the cut being from twenty-five to fifty cents per ton on the \$12 for No. 2 foundry price. The demand for charcoal iron is light, but the furnaces have orders for two or three months yet. The failure of the railroads to grant the fifty cents reduction asked by the furnacemen was a great disappointment to the iron producers, as it was hoped that in this way the dull market for iron would be made up to some extent. The railroads took the position that iron was moving pretty well at the present rate, and a reduction was not yet due. It was intimated that the reduction might be made a little later if the conditions warranted it.

Foundries and machine shops report some quietness this week, incident, the owners think, to the dull season of the year. The brass men are in clover, doing a big business. Finished iron and steel are in poor demand. The scrap-iron men are doing very little. Coke is fairly active, and coal doing well. Steel is active, and the output of both the billet mill and steel mill at Ensley is grabbed up as soon as made. General business is good, though seasonable, and wholesale trade has picked up wonderfully since the miners got back to work again.

The Empire Plow Co. has at last gotten its plant at Ensley in running shape, and is now at work. The first work was done last Monday, and the past week has been

taken up in getting the various departments in working trim. The force will consist of about 100 men. The company will use 3000 to 5000 tons of steel a season.

J. E. Hollingsworth has secured the contract to construct the buildings of the Birmingham Drop Forge & Machine Co. at Bessemer, and is now at work. The plant will be on five acres of land near the plant of the United States Cast Iron Pipe & Foundry Co., and the investment will be something like \$100,000. W. E. Nicholls, who has been master mechanic of the pipe plant mentioned, will have charge as general manager.

George Van Zandt, a Chicago man, is opening up extensive coal properties in the western portion of Etowah county. He has 750 acres near Altoona, which has good working seams, and it is expected that 1000 tons a day will be produced in a short time. Mr. Van Zandt will also open mines on Sand mountain, further north.

The De Soto Mining Co. at mines in Talladega county is getting out ore that runs \$16 a ton. H. W. L.

#### The Iron and Metal Trades.

In its review of the week the Iron Age says:

"The enlarged production of pig-iron has not been accompanied by a heavy increase in stocks of iron unsold, as might have been expected. The increase in anthracite and coke stocks was only 43,610 tons. This shows that consumption is still proceeding under high pressure. In confirmation of this our market reports show that in some sections of the country an urgent demand exists for pig-iron on spot or for quick shipment. This, however, does not apply to all sections, as complaint comes from the South that furnace companies are finding considerable trouble in getting some of their customers to take iron which had been sold at higher prices. But it may be said that it often happens that the very people who are thus repudiating contracts are purchasing iron from other parties at lower prices, so that this does not really indicate a reduction in consumption.

"The Southern railroad companies last week considered the application of Southern pig-iron manufacturers for reduced freight rates on pig-iron, but decided adversely. It is likely that as the railroads of that section are even now suffering from a shortage of cars to move cotton and other products, the consideration of a lower freight rate on pig-iron will be deferred until a more urgent necessity appears for taking such action. The adverse action may be regarded as distinctly favorable to Northern pig-iron manufacturers, who are thus temporarily saved from increased competition."

#### Big Kentucky Coal Project.

As we go to press Senator J. N. Camden of Parkersburg wires regarding the big coal project mentioned on page 135:

"We have recently purchased a field of about 350,000 acres on the waters of the Big Sandy, in Eastern Kentucky, of the finest fuel and coking coal in the United States, but have no plans for its development at present."

#### Anniston Pig-Iron.

Mr. John B. Lee, who is superintendent of the iron-making department of a car-building plant at Chicago, is quoted by the Hot Blast as stating that on account of the superior quality of the pig-iron made at Anniston his company is purchasing more largely of it than of any other iron in the country.

The sales in the Joplin (Mo.) district during the week ended September 5 were 10,206,370 pounds of zinc ore and 942,320 pounds of lead ore, valued in the aggregate at \$208,530.

## RAILROADS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

## AN ELECTRIC COAL ROAD.

A 50-Mile Line from Fort Smith Through Sebastian County.

Mr. S. A. Williams, president of the Sebastian Electrical Co., Fort Smith, Ark., writes the Manufacturers' Record: "This interurban enterprise is to run trolley cars over the coal area of the county, connecting all present and (as near as may be) all future towns with each other and with Fort Smith. The present towns are Jenny Lind, Bonanza, Huntington, Mansfield, Hartford, Mines Nos. 3 and 4 of American Smokeless Coal Co., Burma, Montreal, Greenwood and Wickerville. Greenwood is the county seat of the county and the geographical center. It will therefore be the power point, with substations where needed. The length of the line as now proposed will be about fifty miles, and will connect about 38,000 population (including Fort Smith), or about 750 people to the mile. It will connect with the Frisco, Missouri Pacific, Choctaw, Midland Valley, Arkansas Central and Kansas City Southern railroads.

"As yet we are not ready for construction bids, etc. The right of way is being secured as fast as an undertaking of that kind can be accomplished, but we hope to commence construction in the near future.

"This county (Sebastian) is practically one coal bed. The coal is of a semi-bituminous and anthracite nature, and ranges as high as 80 per cent. fixed carbon, and is smokeless. While mines have been in operation for more than fifteen years, its real development as a coal-mining center has only begun. There are now eight large mining towns in the county, each employing from 600 to 1500 miners. All are constantly increasing their openings, and hence their output. As the number of openings increase the required number of miners increase, and as the deposits are practically exhausted, the population of all these points will increase with the development of its mines. Moreover, the coal land occupied by the present actual operators is a very insignificant portion of the coal area of this county. Syndicates are rapidly purchasing large tracts of this land, and the probabilities are that inside of two or three years we will have double the number of mining towns in Sebastian county.

## Will Extend to Clintwood.

[Special Cor. Manufacturers' Record.]  
Norton, Va., September 5.

The Cumberland Transportation, Light & Power Co., which obtained a charter some few weeks ago from the corporation commission of Virginia for the purpose of building and operating an electric car line connecting the towns of Big Stone Gap, Stonega, Appalachia, Dorchester, Norton, Wise, Glamorgan, Goeburn and Tom's Creek in Wise county, held its first stockholders' meeting at the office of the First National Bank of Norton yesterday. The citizens of Clintwood in Dickenson county were represented at this meeting by Roland E. Chase and Gallie Friend of that town, and who are president and first vice-president of the Clintwood Bank of Clintwood. On behalf of the town they made the company the proposition to secure subscriptions to one-half of the increased stock necessary to extend this line to Clintwood from Tom's Creek, and the company decided to make the extension, and has asked for an amendment to its charter to that effect. The proposed ex-

tension to Clintwood is looked upon by many as promising to be the best-paying part of the line.

## Memphis &amp; Gulf.

Seely Dunn, vice-president and general manager of the proposed Memphis & Gulf Railroad, is reported as saying that surveys have been made and that construction will begin soon, the money for the enterprise having been secured. The construction will be done by the Gulf States Construction Co., recently organized at New Orleans. The line is to run from Memphis, Tenn., via Meridian, Miss., to Pensacola, Fla. Chester H. Pond of Morehead, Miss., is president of the company, and the other directors besides Mr. Dunn, whose headquarters are at St. Louis, are John L. Lewis of Meridian, Miss.; Scott E. Rice of New Orleans and Murray F. Smith of Vicksburg, Miss. In reply to inquiries Mr. Dunn denied that the Illinois Central was back of the new company, and further stated that it was an independent line.

## St. Louis, El Reno &amp; Western.

The latest information concerning the St. Louis, El Reno & Western Railway is that the Middle States Construction Co., of which J. E. Henderson is president, at El Reno, O. T., has the contract for constructing and equipping the line, which is now being built from Guthrie southwest through El Reno. The grading on sixty miles of road is about 75 per cent. completed, and track-laying is to begin at Guthrie about October 1. The contracts for track-laying and for building depots, section houses, water stations and fencing have not yet been let. C. C. Nelson of Fort Scott, Kan., is president of the company, and H. A. Genung, El Reno, O. T., is its chief engineer.

## Entrance to New Orleans.

Advices from New Orleans report that the city council has granted the Louisiana Railway & Navigation Co., formerly the Shreveport & Red River Valley Railway, entrance to the city. This permits it to reach the wharves over the proposed Belt Line of the New Orleans Terminal Co. or Frisco system. If the Frisco does not build the belt within a year, it is provided that the Louisiana Railway & Navigation Co. may go ahead and build the line.

## Will Build a Big Dam.

The Virginia Passenger & Power Co. of Richmond will build a 40-foot dam on the Appomattox river near Petersburg, Va., for the purpose of developing power to operate electric generators for the system. It is also proposed to build extensions to Mechanicsville and Ashland. There is, according to further report, a possibility that the company will buy the old Farmville & Powhatan Railroad and convert it to an electric line.

## New Mexico to Texas.

Concerning the report that the Santa Fe Central Railway Co. will build an extension from its line at Torrance, N. M., to Big Springs, Texas, Mr. Allan G. Kennedy, chief engineer, writes the Manufacturers' Record that surveying parties for the work are just starting into the field. Such a line would be 300 miles long and would connect with the Texas & Pacific Railway at Big Springs.

## Coal &amp; Coke Extension.

The Coal & Coke Railway Co. is receiving bids at the office of W. H. Bower, general manager, Elkins, W. Va., for the grading and masonry of about ten miles

of single-track railroad from the mouth of Copen run, near Burnsville, Blackstone county, West Virginia, to a point on Perkins fork of Cedar creek, including one tunnel 1100 feet long.

## Railroad Notes.

Wabash Railroad interests, according to a dispatch from Morgantown, W. Va., have purchased 4000 acres more of coal land in Monongalia county, and have begun grading for the extension from Pittsburg, which will run almost north and south through the county, starting near McCurdyville.

The Columbus, Memphis & Pensacola Railroad Co., organized at Columbus, Miss., is reported to be a Frisco project. The immediate purpose is to build from Columbus to Aberdeen, Miss., thirty miles, to connect with the Frisco and Illinois Central. The ultimate plan is to go to Pensacola, about 250 miles.

According to reports from Philadelphia, the Wabash Railroad may enter that city by building a connection from the Western Maryland Railroad at Baltimore or a point north of that city to Parkersburg, Pa., and going thence to Philadelphia over the line of the proposed Philadelphia & Western road, an electric project.

The Northern Central Railway Co. reports for July as follows: Gross earnings, increase \$294,500; expenses, increase \$212,400; net earnings, increase \$82,100. For seven months ending July 31: Gross earnings, increase \$1,242,100; expenses, increase \$1,193,500; net earnings, increase \$48,600. Comparisons are made with the corresponding periods of last year.

The Council of State of North Carolina has declined a proposition made to lease the Atlantic & North Carolina Railroad, the line from Goldsboro to Morehead City. The proposition was made by Walter W. Mills of Raleigh and H. L. Finlayson of Goldsboro. The offer was an average annual rent of 2 per cent. and a proposition to build an extension from some point on the line to a distance of fifty miles, the extension to go west of Kinston, N. C.

It is reported from Louisville, Ky., that a double-track electric belt railway is to connect that city with Jeffersonville and New Albany, Ind. This system is to be formed by a combination of the Kentucky & Indiana Bridge & Railway Co. and the Louisville & Southern Indiana Traction Co. Cars on the new lines are to be running by October 1. According to the plan \$250,000 are to be spent for constructing new track to make it a double line.

The Victor Cotton Mills property at Charlotte, N. C., was bid in by Dr. John H. McAden at the sale held September 7. His bid was \$85,000, and it is understood that he represents the directors who will reorganize the company and continue operating the plant. However, the sale has to be confirmed by the court. There are 12,700 ring spindles and full complement of machinery for manufacturing 20s to 30s yarns in the mill.

Georgia granite from Lithonia and Stone Mountain is moving at the rate of fifteen carloads daily to St. Louis to be used for curbing, paving and numerous other municipal improvements.

The Southeastern Millers' Association, representing Kentucky, Indiana, Georgia, Tennessee and North Carolina flouring mills, has elected Mr. E. M. Kelly of Nashville, Tenn., president.

It is proposed to build a cotton-thread mill at Central, S. C., and subscriptions to a stock company are now being solicited.

## TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the Manufacturers' Record. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

## A \$500,000 Mill Completed.

One of the most modern cotton-manufacturing plants in the South is that of the Brookside Mills of Knoxville, Tenn., which has just completed the extensive additions announced in the Manufacturers' Record more than a year ago. About \$500,000 has been the cost of the new buildings, textile machinery and other apparatus, bringing the Brookside equipment up to 60,000 spindles and 1300 looms, though the buildings are designed to take an additional 30,000 spindles and 700 looms. The plans of Brookside Mill No. 2 were prepared by F. P. Sheldon, mill engineer, Providence, R. I., and the contractor was the Flynt Building & Construction Co., Palmer, Mass., which completed its work in eight months. The machinery for the picking, carding, spinning, twisting and slashing was furnished by the Howard & Bullough American Machine Co., Pawtucket, R. I.; spooling, warping and looms by the Draper Company, Hopedale, Mass.; cloth-finishing machinery by the Curtis & Marble Machine Co., Worcester, Mass.; steam boilers (equipped with Hawley down-draft furnaces and Green economizers) of the Continental Scotch marine type by the Holthoff Machinery Co., Milwaukee, Wis., and cross-compound condensing engines by the Filer & Stowell Co., Milwaukee, Wis.

The mills are designed for odd goods covering a wide range and spinning from 5s to 50s yarns. They are under the immediate supervision of William T. Lang, agent, who took charge of the Brookside enterprise ten years ago, when the equipment consisted of 5300 spindles and 176 looms.

## Greensboro's Latest Mill.

Site has been purchased for the \$250,000 cotton mill to be built at Greensboro, N. C., by W. I. Young, 1020 Empire Building, Atlanta, Ga., and his associates. The land is three miles west of Greensboro on the main line of the Southern Railway, and the work of construction will not begin for sixty or ninety days. J. E. Serrine of Greenville, N. C., will be the mill architect and engineer. No further details as to the plant are ready for announcement. As stated in the Manufacturers' Record of August 27, the mill is to be doubled soon after operations have begun with the initial equipment. The product will be special cotton fabrics, but the exact character of same cannot be stated as yet.

## Textile Notes.

Blacksburg (S. C.) Spinning and Knitting Mills has resumed operations after installing ten new knitting machines and having overhauled its old equipment.

Messrs. P. H. Hanes, P. H. Hanes, Jr., and William M. Hanes of Winston, N. C., have incorporated the Hanes Knitting Co., with capital stock of \$250,000, of which \$100,000 has been subscribed. No further details are stated.

W. T. Owen, secretary of the Commercial Club, 1115 Noble street, Anniston, Ala., wants addresses of manufacturers of machinery for making cotton towels. It



is presumed that the institution named is endeavoring to locate a towel mill.

Cora Cotton Mills, Kings Mountain, N. C., has amended charter so as to permit the issuance of \$50,000 of preferred stock, bearing 7 per cent. interest, payable semi-annually. Possibly the company contemplates making improvements. There are 5184 spindles in the mill now.

The Loray Mills, Gastonia, N. C., has begun the shipment of 4000 bales of standard sheeting to China. Twenty-six cars will be required to carry this order, and its value is about \$176,000. The company named has established a reputation in the Chinese empire for its product.

Anniston (Ala.) Cordage Co. will purchase additional spinning and cording machinery for its plant. While this new equipment is being installed the old equipment will be overhauled and rearranged. This company has been operating double time for some months, and finds increased facilities necessary in order to meet the requirements of its trade.

Messrs. Wm. Johnston and E. M. Fitzgerald of Salem, Va., will organize a \$25,000 company to establish a woolen mill and trousers factory at Salem, Va. This enterprise will replace the Holstein Woolen Mills, which was lately destroyed by fire at Salem. The owners of the old plant having decided not to rebuild, the result is the organization of this new company.

Chesterfield Manufacturing Co., Petersburg, Va., has begun the improvements to its mill, recently reported. A dam will be built to develop 250 horse-power and enable the company to discard steam as a motive power. New machinery for manufacturing yarns is to be bought and added to the present spinning equipment, while the looms have been discarded, as stated previously.

The Eatonton Cotton Mills and water-power-electrical plant in connection, owned by the Eatonton Electrical Co., Eatonton, Ga., have been sold by court order. The purchaser is J. W. English, Jr., of Atlanta, Ga., his bid being \$43,500. This sale has to be ratified by the referee, and it is believed that his opinion will be adverse at the price named. The mill has an equipment of 2000 spindles, 100 broad looms, etc.

Another cotton mill will be built at Charlotte, N. C., but particulars regarding the enterprise have not been announced as yet. It is stated that one who is interested in the project said: "The announcement will be read with interest not only in Charlotte, but throughout the milling districts of New England, and it will be of a character to interest textile circles in general. It will be a milling enterprise on a new departure for the South, and will show that the manufacturing interests of this section are branching out on new and diversified lines. It will show further that we are waking up to the fact that we can make anything that can be manufactured out of cotton." Probably announcements as to details will be made next week.

#### QUOTATIONS OF COTTON YARNS.

By Buckingham, Paulson & Co., New York, Philadelphia and Chicago, September 8.

No. 10s-1 and 12s-1 warps.....	17 1/2 @ 18
No. 14s-1 warps.....	18 @
No. 16s-1 warps.....	18 1/2 @ 19
No. 20s-1 warps.....	19 1/2 @ 20
No. 22s-1 warps.....	20 @
No. 24s-1 warps.....	21 @
No. 26s-1 warps.....	21 1/2 @
No. 28s-1 warps.....	22 @
No. 30s-1 warps.....	22 1/2 @
No. 32s-1 warps.....	23 @
No. 34s-1 warps.....	23 1/2 @
No. 36s-1 warps.....	24 @
No. 38s-1 warps.....	24 1/2 @
No. 40s-1 warps.....	25 @
No. 42s-1 warps.....	25 1/2 @
No. 44s-1 warps.....	26 @
No. 46s-1 warps.....	26 1/2 @
No. 48s-1 warps.....	27 @
No. 50s-1 warps.....	27 1/2 @
No. 52s-1 warps.....	28 @
No. 54s-1 warps.....	28 1/2 @
No. 56s-1 warps.....	29 @
No. 58s-1 warps.....	29 1/2 @
No. 60s-1 warps.....	30 @
No. 62s-1 warps.....	30 1/2 @
No. 64s-1 warps.....	31 @
No. 66s-1 warps.....	31 1/2 @
No. 68s-1 warps.....	32 @
No. 70s-1 warps.....	32 1/2 @
No. 72s-1 warps.....	33 @
No. 74s-1 warps.....	33 1/2 @
No. 76s-1 warps.....	34 @
No. 78s-1 warps.....	34 1/2 @
No. 80s-1 warps.....	35 @
No. 82s-1 warps.....	35 1/2 @
No. 84s-1 warps.....	36 @
No. 86s-1 warps.....	36 1/2 @
No. 88s-1 warps.....	37 @
No. 90s-1 warps.....	37 1/2 @
No. 92s-1 warps.....	38 @
No. 94s-1 warps.....	38 1/2 @
No. 96s-1 warps.....	39 @
No. 98s-1 warps.....	39 1/2 @
No. 100s-1 warps.....	40 @
No. 102s-1 warps.....	40 1/2 @
No. 104s-1 warps.....	41 @
No. 106s-1 warps.....	41 1/2 @
No. 108s-1 warps.....	42 @
No. 110s-1 warps.....	42 1/2 @
No. 112s-1 warps.....	43 @
No. 114s-1 warps.....	43 1/2 @
No. 116s-1 warps.....	44 @
No. 118s-1 warps.....	44 1/2 @
No. 120s-1 warps.....	45 @
No. 122s-1 warps.....	45 1/2 @
No. 124s-1 warps.....	46 @
No. 126s-1 warps.....	46 1/2 @
No. 128s-1 warps.....	47 @
No. 130s-1 warps.....	47 1/2 @
No. 132s-1 warps.....	48 @
No. 134s-1 warps.....	48 1/2 @
No. 136s-1 warps.....	49 @
No. 138s-1 warps.....	49 1/2 @
No. 140s-1 warps.....	50 @
No. 142s-1 warps.....	50 1/2 @
No. 144s-1 warps.....	51 @
No. 146s-1 warps.....	51 1/2 @
No. 148s-1 warps.....	52 @
No. 150s-1 warps.....	52 1/2 @
No. 152s-1 warps.....	53 @
No. 154s-1 warps.....	53 1/2 @
No. 156s-1 warps.....	54 @
No. 158s-1 warps.....	54 1/2 @
No. 160s-1 warps.....	55 @
No. 162s-1 warps.....	55 1/2 @
No. 164s-1 warps.....	56 @
No. 166s-1 warps.....	56 1/2 @
No. 168s-1 warps.....	57 @
No. 170s-1 warps.....	57 1/2 @
No. 172s-1 warps.....	58 @
No. 174s-1 warps.....	58 1/2 @
No. 176s-1 warps.....	59 @
No. 178s-1 warps.....	59 1/2 @
No. 180s-1 warps.....	60 @
No. 182s-1 warps.....	60 1/2 @
No. 184s-1 warps.....	61 @
No. 186s-1 warps.....	61 1/2 @
No. 188s-1 warps.....	62 @
No. 190s-1 warps.....	62 1/2 @
No. 192s-1 warps.....	63 @
No. 194s-1 warps.....	63 1/2 @
No. 196s-1 warps.....	64 @
No. 198s-1 warps.....	64 1/2 @
No. 200s-1 warps.....	65 @
No. 202s-1 warps.....	65 1/2 @
No. 204s-1 warps.....	66 @
No. 206s-1 warps.....	66 1/2 @
No. 208s-1 warps.....	67 @
No. 210s-1 warps.....	67 1/2 @
No. 212s-1 warps.....	68 @
No. 214s-1 warps.....	68 1/2 @
No. 216s-1 warps.....	69 @
No. 218s-1 warps.....	69 1/2 @
No. 220s-1 warps.....	70 @
No. 222s-1 warps.....	70 1/2 @
No. 224s-1 warps.....	71 @
No. 226s-1 warps.....	71 1/2 @
No. 228s-1 warps.....	72 @
No. 230s-1 warps.....	72 1/2 @
No. 232s-1 warps.....	73 @
No. 234s-1 warps.....	73 1/2 @
No. 236s-1 warps.....	74 @
No. 238s-1 warps.....	74 1/2 @
No. 240s-1 warps.....	75 @
No. 242s-1 warps.....	75 1/2 @
No. 244s-1 warps.....	76 @
No. 246s-1 warps.....	76 1/2 @
No. 248s-1 warps.....	77 @
No. 250s-1 warps.....	77 1/2 @
No. 252s-1 warps.....	78 @
No. 254s-1 warps.....	78 1/2 @
No. 256s-1 warps.....	79 @
No. 258s-1 warps.....	79 1/2 @
No. 260s-1 warps.....	80 @
No. 262s-1 warps.....	80 1/2 @
No. 264s-1 warps.....	81 @
No. 266s-1 warps.....	81 1/2 @
No. 268s-1 warps.....	82 @
No. 270s-1 warps.....	82 1/2 @
No. 272s-1 warps.....	83 @
No. 274s-1 warps.....	83 1/2 @
No. 276s-1 warps.....	84 @
No. 278s-1 warps.....	84 1/2 @
No. 280s-1 warps.....	85 @
No. 282s-1 warps.....	85 1/2 @
No. 284s-1 warps.....	86 @
No. 286s-1 warps.....	86 1/2 @
No. 288s-1 warps.....	87 @
No. 290s-1 warps.....	87 1/2 @
No. 292s-1 warps.....	88 @
No. 294s-1 warps.....	88 1/2 @
No. 296s-1 warps.....	89 @
No. 298s-1 warps.....	89 1/2 @
No. 300s-1 warps.....	90 @
No. 302s-1 warps.....	90 1/2 @
No. 304s-1 warps.....	91 @
No. 306s-1 warps.....	91 1/2 @
No. 308s-1 warps.....	92 @
No. 310s-1 warps.....	92 1/2 @
No. 312s-1 warps.....	93 @
No. 314s-1 warps.....	93 1/2 @
No. 316s-1 warps.....	94 @
No. 318s-1 warps.....	94 1/2 @
No. 320s-1 warps.....	95 @
No. 322s-1 warps.....	95 1/2 @
No. 324s-1 warps.....	96 @
No. 326s-1 warps.....	96 1/2 @
No. 328s-1 warps.....	97 @
No. 330s-1 warps.....	97 1/2 @
No. 332s-1 warps.....	98 @
No. 334s-1 warps.....	98 1/2 @
No. 336s-1 warps.....	99 @
No. 338s-1 warps.....	99 1/2 @
No. 340s-1 warps.....	100 @
No. 342s-1 warps.....	100 1/2 @
No. 344s-1 warps.....	101 @
No. 346s-1 warps.....	101 1/2 @
No. 348s-1 warps.....	102 @
No. 350s-1 warps.....	102 1/2 @
No. 352s-1 warps.....	103 @
No. 354s-1 warps.....	103 1/2 @
No. 356s-1 warps.....	104 @
No. 358s-1 warps.....	104 1/2 @
No. 360s-1 warps.....	105 @
No. 362s-1 warps.....	105 1/2 @
No. 364s-1 warps.....	106 @
No. 366s-1 warps.....	106 1/2 @
No. 368s-1 warps.....	107 @
No. 370s-1 warps.....	107 1/2 @
No. 372s-1 warps.....	108 @
No. 374s-1 warps.....	108 1/2 @
No. 376s-1 warps.....	109 @
No. 378s-1 warps.....	109 1/2 @
No. 380s-1 warps.....	110 @
No. 382s-1 warps.....	110 1/2 @
No. 384s-1 warps.....	111 @
No. 386s-1 warps.....	111 1/2 @
No. 388s-1 warps.....	112 @
No. 390s-1 warps.....	112 1/2 @
No. 392s-1 warps.....	113 @
No. 394s-1 warps.....	113 1/2 @
No. 396s-1 warps.....	114 @
No. 398s-1 warps.....	114 1/2 @
No. 400s-1 warps.....	115 @
No. 402s-1 warps.....	115 1/2 @
No. 404s-1 warps.....	116 @
No. 406s-1 warps.....	116 1/2 @
No. 408s-1 warps.....	117 @
No. 410s-1 warps.....	117 1/2 @
No. 412s-1 warps.....	118 @
No. 414s-1 warps.....	118 1/2 @
No. 416s-1 warps.....	119 @
No. 418s-1 warps.....	119 1/2 @
No. 420s-1 warps.....	120 @
No. 422s-1 warps.....	120 1/2 @
No. 424s-1 warps.....	121 @
No. 426s-1 warps.....	121 1/2 @
No. 428s-1 warps.....	122 @
No. 430s-1 warps.....	122 1/2 @
No. 432s-1 warps.....	123 @
No. 434s-1 warps.....	123 1/2 @
No. 436s-1 warps.....	124 @
No. 438s-1 warps.....	124 1/2 @
No. 440s-1 warps.....	125 @
No. 442s-1 warps.....	125 1/2 @
No. 444s-1 warps.....	126 @
No. 446s-1 warps.....	126 1/2 @
No. 448s-1 warps.....	127 @
No. 450s-1 warps.....	127 1/2 @
No. 452s-1 warps.....	128 @
No. 454s-1 warps.....	128 1/2 @
No. 456s-1 warps.....	129 @
No. 458s-1 warps.....	129 1/2 @
No. 460s-1 warps.....	130 @
No. 462s-1 warps.....	130 1/2 @
No. 464s-1 warps.....	131 @
No. 466s-1 warps.....	131 1/2 @
No. 468s-1 warps.....	132 @
No. 470s-1 warps.....	132 1/2 @
No. 472s-1 warps.....	133 @
No. 474s-1 warps.....	133 1/2 @
No. 476s-1 warps.....	134 @
No. 478s-1 warps.....	134 1/2 @
No. 480s-1 warps.....	135 @
No. 482s-1 warps.....	135 1/2 @
No. 484s-1 warps.....	136 @
No. 486s-1 warps.....	136 1/2 @
No. 488s-1 warps.....	137 @
No. 490s-1 warps.....	137 1/2 @
No. 492s-1 warps.....	138 @
No. 494s-1 warps.....	138 1/2 @
No. 496s-1 warps.....	139 @
No. 498s-1 warps.....	139 1/2 @
No. 500s-1 warps.....	140 @
No. 502s-1 warps.....	140 1/2 @
No. 504s-1 warps.....	141 @
No. 506s-1 warps.....	141 1/2 @
No. 508s-1 warps.....	142 @
No. 510s-1 warps.....	142 1/2 @
No. 512s-1 warps.....	143 @
No. 514s-1 warps.....	143 1/2 @
No. 516s-1 warps.....	144 @
No. 518s-1 warps.....	144 1/2 @
No. 520s-1 warps.....	145 @
No. 522s-1 warps.....	145 1/2 @
No. 524s-1 warps.....	146 @
No. 526s-1 warps.....	146 1/2 @
No. 528s-1 warps.....	147 @
No. 530s-1 warps.....	147 1/2 @
No. 532s-1 warps.....	148 @
No. 534s-1 warps.....	148 1/2 @
No. 536s-1 warps.....	149 @
No. 538s-1 warps.....	149 1/2 @
No. 540s-1 warps.....	150 @
No. 542s-1 warps.....	150 1/2 @
No. 544s-1 warps.....	151 @
No. 546s-1 warps.....	151 1/2 @
No. 548s-1 warps.....	152 @
No. 550s-1 warps.....	152 1/2 @
No. 552s-1 warps.....	153 @
No. 554s-1 warps.....	153 1/2 @
No. 556s-1 warps.....	154 @
No. 558s-1 warps.....	154 1/2 @
No. 560s-1 warps.....	155 @
No. 562s-1 warps.....	155 1/2 @
No. 564s-1 warps.....	156 @
No. 566s-1 warps.....	156 1/2 @
No. 568s-1 warps.....	157 @
No. 570s-1 warps.....	157 1/2 @
No. 572s-1 warps.....	158 @
No. 574s-1 warps.....	158 1/2 @
No. 576s-1 warps.....	159 @
No. 578s-1 warps.....	159 1/2 @
No. 580s-1 warps.....	160 @
No. 582s-1 warps.....	160 1/2 @
No. 584s-1 warps.....	161 @
No. 586s-1 warps.....	161 1/2 @
No. 588s-1 warps.....	162 @
No. 590s-1 warps.....	162 1/2 @
No. 592s-1 warps.....	163 @
No. 594s-1 warps.....	163 1/2 @
No. 596s-1 warps.....	164 @
No. 598s-1 warps.....	164 1/2 @
No. 600s-1 warps.....	165 @
No. 602s-1 warps.....	165 1/2 @
No. 604s-1 warps.....	166 @
No. 606s-1 warps.....	166 1/2 @
No. 608s-1 warps.....	167 @
No. 610s-1 warps.....	167 1/2 @
No. 612s-1 warps.....	168 @
No. 614s-1 warps.....	168 1/2 @
No. 616s-1 warps.....	169 @
No. 618s-1 warps.....	169 1/2 @
No. 620s-1 warps.....	170 @
No. 622s-1 warps.....	170 1/2 @
No. 624s-1 warps.....	171 @
No. 626s-1 warps.....	171 1/2 @
No. 628s-1 warps.....	172 @
No. 630s-1 warps.....	172 1/2 @
No. 632s-1 warps.....	173 @
No. 634s-1 warps.....	173 1/2 @
No. 636s-1 warps.....	174 @
No. 638s-1 warps.....	174 1/2 @
No. 640s-1 warps.....	175 @
No. 642s-1 warps.....	175 1/2 @
No. 644s-1 warps.....	176 @
No. 646s-1 warps.....	176 1/2 @
No. 648s-1 warps.....	177 @
No. 650s-1 warps.....	177 1/2 @
No. 652s-1 warps.....	178 @
No. 654s-1 warps.....	178 1/2 @
No. 656s-1 warps.....	179 @
No. 658s-1 warps.....	179 1/2 @
No. 660s-1 warps.....	180 @
No. 662s-1 warps.....	180 1/2 @
No. 664s-1 warps.....	181 @
No. 666s-1 warps.....	181 1/2 @
No. 668s-1 warps.....	182 @
No. 670s-1 warps.....	182 1/2 @
No. 672s-1 warps.....	183 @
No. 674s-1 warps.....	183 1/2 @
No. 676s-1 warps.....	184 @
No. 678s-1 warps.....	184 1/2 @
No. 680s-1 warps.....	185 @
No. 682s-1 warps.....	185 1/2 @
No. 684s-1 warps.....	186 @
No. 686s-1 warps.....	186 1/2 @
No. 688s-1 warps.....	187 @
No. 690s-1 warps.....	187 1/2 @
No. 692s-1 warps.....	188 @
No. 694s-1 warps.....	188 1/2 @
No. 696s-1 warps.....	189 @
No. 698s-1 warps.....	189 1/2 @
No. 700s-1 warps.....	190 @
No. 702s-1 warps.....	190 1/2 @
No. 704s-1 warps.....	191 @

## LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

### LUMBER MARKET REVIEWS.

#### Baltimore.

Office Manufacturers' Record,  
Baltimore, Md., September 9.

The week under review has developed a rather limited volume of business in nearly every avenue of the local lumber market, and the demand showing but little improvement over the previous week. The inquiry from builders, boxmakers and other woodworking concerns is restricted to smaller lots than usual, and as stocks are quite liberal, prices in some cases are easier. Receipts of North Carolina pine continue to increase, and in box grades, with a liberal offering and uncertain demand, the market for these particular grades shows a slight depression. In the general list of values for North Carolina pine, however, prices continue steady, and manufacturers look for a better trade in the early fall months. Cypress, while not in brisk demand, is moving as usual, with prices unchanged. White pine is firm, with a limited inquiry and stocks ample for present wants. Poplar is decidedly easier, with the inquiry light, while the offerings are liberal and the domestic as well as the foreign demand much less decided than that of thirty or sixty days ago. In hardwoods there is a moderate volume of business reported, and with liberal offerings buyers are not disposed to accept present prices at the moment, and are purchasing in small lots to cover present wants. The tone, however, for oak, ash and other woods is steady, and later on a firmer market is expected. The foreign trade in hardwoods is limited, and exporters find their shipping facilities reduced in the absence of steamers which have been sent to other ports. The reports also from Europe show but little improvement, and shippers are not urging business at present.

#### Brunswick.

[From our own Correspondent.]

Brunswick, Ga., September 7.

The outward movement of all classes of lumber stocks from this section for the month of August, while larger, did not reach that of July. During August Brunswick shipped 17,810,193 superficial feet. The foreign exports were 630,000 feet. At the nearby port of Darien the August movement amounted to 11,531,992, all foreign—England 7,621,992 feet, Scotland 1,611,000 feet and Germany 2,299,000 feet. During the same month the naval-stores movement from Brunswick amounted to, coastwise, 9950 barrels of rosin and 2275 barrels of turpentine; foreign, 24,518 barrels of rosin and 3492 barrels of turpentine, a grand total of 34,468 barrels of rosin and 5767 barrels of turpentine. At Fernandina the naval-stores movement was all foreign, and amounted to 29,543 round barrels of rosin and 18,893 casks of turpentine. The movement so far for the month indicates a heavier volume than that of August. The coastwise freight-rate situation shows no change, but is rather inclined to stiffen. Quotations are now made from Brunswick as a South Atlantic basis to New York with lumber at \$6.25 and railroad cross-ties 18 to 19 cents. Reports from interior mills state that large orders are being booked, to be filled between October 1 and Christmas.

#### Pensacola.

[From our own Correspondent.]

Pensacola, Fla., September 7.

During the past week the lumber and timber market has been fairly active, but

business so far this month is less in volume. Pitch-pine timber ranges from 14 to 16 cents for 30-foot averages and over, with sales about  $\frac{1}{4}$ ¢ to  $\frac{1}{2}$ ¢ lower. In lumber and timber mills are all busy, and, owing to copious rains recently, the streams are swollen and logging is being carried on on a larger scale. There is a good interior demand for the lumber output, and prices are steady. A number of vessels are chartered to load this month, and shippers look for considerable business in September. The fiscal year which closed on the 31st ult. has been one of unusual volume in all wood products, and the general business of the port has been of greater prosperity than any year in the last quarter of a century. The collector of customs reports the entrances and clearances of vessels during the year as follows: There entered at the custom-house during the year 215 sailing vessels of a tonnage of 168,873 tons, and 302 steamers registering 308,355 tons, making a total of 517 vessels with an aggregate tonnage of 477,228. There cleared during the same period 217 sailing vessels and 280 steamers, or a total of 497 vessels, aggregating 616,661 tons. The export trade of the port during the year has been steady and substantial, and in the item of wood products the improvement over other years is encouraging. The exports of sawn timber for the year amounted to 145,249,000 superficial feet, valued at \$1,710,500; hewn timber 339,244 cubic feet, valued at \$46,674; lumber 134,753,000 superficial feet, valued at \$1,909,629; staves 498,681 pieces, valued at \$43,132, and mahogany, oak, walnut and poplar logs valued at \$299,262. Among the steamship lines now in service from this port, the Atlantic & Gulf Steamship Co. operates a line of freight and passenger steamers to Apalachicola, Carrabelle, St. Andrews and Millville, giving this city connection with an entirely new territory. The Gulf Transit Co., which has done a very large trade during the year, operates freight steamers between Liverpool, London, Manchester, Antwerp, Rotterdam, Bremen, Genoa, Venice and other continental ports. The Louisville & Nashville Railway will hereafter control the steamers of the Austro-American Line, and will add that fleet of vessels to its present line. The increased volume of export business of the Louisville & Nashville has rendered it necessary for the company to purchase additional wharf properties and to erect more warehouses, upon which large sums will be expended. The new year is entered upon under the most favorable auspices, and under present conditions the business of the port is expected to show a material increase during the next fiscal year. The value of exports for the last fiscal year was \$13,954,003, and imports reached \$1,987,134.

#### Mobile.

[From our own Correspondent.]

Mobile, Ala., September 7.

The week under review has developed few changes in the timber market of this port. Sawn timber is still quoted at 17 cents, but few contracts are made by manufacturers at these figures. Holders are generally firm in their views, and exporters are not pressed for stock, having recently made some heavy shipments. Receipts of hewn timber are light, with little or no stocks of any note on the market. Receipts of logs continue light, and the market is quiet. The lumber market is in good shape, and mills are generally busy, while prices continue firm, and manufacturers look for a very heavy fall and winter business. The demand from South America and from Cuba and Central America is brisk, and shipments liberal to those points. There is a good hardwood trade in progress. One concern, the Mo-

bile Lumber Co., is said to have an order for forty cars of hardwoods for Hamburg, Germany. The same company is also making large shipments to Mexico. The lumber and timber trade of the port for the fiscal year ending August 31, 1903, has shown some very favorable features, and while the increase in the volume of business amounts to over 17,000,000 feet, a not very large sum, the margin of profits has been greater. Of this increase, 5,049,864 superficial feet was in hardwoods, and the increase in this branch of the trade may be taken as the feature of the year's business. The total exports of lumber and timber for the past year were 269,176,158 superficial feet, against 251,626,457 superficial feet last year, and the total of the hardwoods movement was 11,285,292 superficial feet, against 6,235,428 feet last year. There was a gain of 1,000,000 feet in the coastwise movement, but a falling off of 7,000,000 feet in the exports foreign, the total lumber business being 91,949,778 superficial feet, against 98,182,685 superficial feet last year. The volume of the sawn timber exports for the year amounted to 10,511,728 cubic feet, against 8,081,817 cubic feet for the previous season, showing an increase in round numbers of 2,500,000 cubic feet. The total exports of hewn timber for the past year amounted to 1,658,349, against 1,061,627 cubic feet the year previous, showing an increase in round numbers of 600,000 cubic feet.

#### Memphis.

[From our own Correspondent.]

Memphis, Tenn., September 7.

The movement in this section is a fair average one for this season of the year in nearly every branch of the hardwood industry, and while the demand for lumber is not of an urgent character, prominent firms are enjoying a steady trade, and have a fair volume of orders. The new business offering is moderate, and most firms are engaged in filling contracts, which creates considerable trade. There is very little demand from Eastern centers, but from the West there is considerable trade offering. The export trade is slightly improved, and during the early fall a more substantial demand is expected. Reports from all milling sections show an unusual activity among the mills, with a disposition to increase their output while labor is at hand, and before the winter rains set in, restricting to a great degree their operations. The offerings of dry stock at country mills are not much heavier than usual, many mills working on contracts, thus preventing much accumulation of stock, while shipments are made as soon as the lumber is marketable. As to prices of lumber throughout the list, they do not vary materially from those recently reported. Oak, perhaps, shows the most strength, with quarter-sawed and plain sawed red and white oak firm. There is a moderate demand for ash, with stocks scarce and the undertone firm and hardening. The cypress market is quiet, with liberal offerings, and values slightly easier. Poplar shows less strength than formerly, and prices in certain cases are lower. Cottonwood is steady, with a fair inquiry, and for the medium and lower grades there is a better tone.

#### Lumber Notes.

The planing mill of Messrs. D. W. Roper & Goodwin Co. of Berkley, Va., which was damaged by fire several weeks ago, is nearing completion. The plant will be ready to start up this week.

The first shipment of cross-ties on the large order recently placed with the Kirby Lumber Co. of Houston, Texas, for the Brownsville Railroad left Orange on the 1st inst. for Corpus Christi. Other barges will follow in rapid succession.

Bozeman & Etheridge's 40-horse-power saw-mill and all the lumber at the mill were destroyed by fire on the 1st inst. The mill was located two miles from Ty-Ty, Ga. There was no insurance.

The Cheraw Door & Sash Co. of Cheraw, S. C., has been incorporated, with a capital of \$20,000. The incorporators are W. F. Stephenson, D. J. Mathewson, William Godfrey and others.

The McKinniss Shingle Co. of Perryville, Ark., has been incorporated, with a capital of \$10,000, to manufacture shingles and lumber, as recently reported. The company will later on install 50-horse-power boiler, 35-horse-power engine, molder, matcher, resaw and edger.

The Valley Saw-Mill at Hot Springs, Ark., operated by Bush, Smith & Moore, was totally destroyed by fire on the 1st inst., together with a large lot of lumber. The firm's loss is \$20,000, and the buildings, owned by R. L. Williams, \$10,000, neither party having any insurance.

The Davis Manufacturing Co. of Mocksville, N. C., was chartered last week, with a capital of \$10,000, to manufacture coffins, tables, desks and all kinds of furniture. The incorporators are F. M. Gallagher and A. T. Grant, Jr., of Mocksville, and T. E. Proctor of Martinsville, Va., and others.

The shipments of lumber and timber from Pensacola for the month of August were as follows: Sawn timber 24,100,000 superficial feet, lumber 6,005,000 superficial feet, hewn timber 14,718 cubic feet, making a total of 31,005,000 superficial feet of lumber and sawn timber and 14,718 cubic feet of hewn timber.

The Lambert-Murray Company of Asheville, N. C., was chartered last week, with \$50,000 capital authorized and \$10,000 subscribed. The company will do a general lumber and woodworking business in Asheville and Buncombe counties. The incorporators are George H. Lambert, E. P. Murray and H. F. Adicks, Jr.

The Chicago-Mississippi Land & Lumber Co., recently reported as incorporated with a capital of \$400,000, has organized at Greenville, Miss., for conducting a lumber business and developing the timber property recently purchased in Mississippi and elsewhere. The company will erect at once a band mill, contracts for which are now being considered.

The following vessels cleared from Port Tampa last week with full cargoes of lumber: Barkentine Peerless, for Havana, Cuba, with 197,000 feet by the Kirkland Lumber Co.; schooner Popi Ramirez, for Irvington, N. Y., with 400,000 feet from Beckwith, Warren & Bro.; and schooner Madeline, a cargo for Calbarien, Cuba, from N. E. Gillett.

The shipments of lumber from Fernandina, Fla., for the month of August amounted to 10,968,070, and of cross-ties 27,000, or a total of 12,183,182 feet. The schooner Jennie French Potter is on passage from Portland, Maine, and will load with 35,000 cross-ties from G. H. Baxter & Co. Four other vessels consigned to J. R. Hill will load in Fernandina during this month, carrying out 4,500,000 feet of lumber.

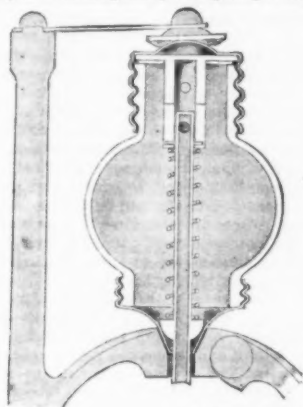
Capt. C. L. Chesnut, superintendent of the Board of Trade of Savannah, Ga., reports the movement in naval stores for the year ending August 31, 1903, as follows: Receipts of spirits for 1902-1903 are 227,891 barrels, against 302,398 barrels for 1901-1902. Receipts of rosin for 1902-1903 are 781,666 barrels, against 1,005,386 barrels for 1901-1902. In foreign exports for 1902-1903 there were 149,198 barrels of spirits and 450,485 barrels of rosin shipped. Domestic shipments for the same year amounted to 96,924 barrels of spirits and 423,958 barrels of rosin.



## MECHANICAL.

## A Loose-Pulley Lubricator.

The lubrication of loose pulleys causes much trouble and labor. It is well known that the usual method is for the mechanic to go over the pulleys once a day and see that they are in good condition and that the shafts are well oiled. Generally there is either too much or too little oil used, and consequently the pulleys either



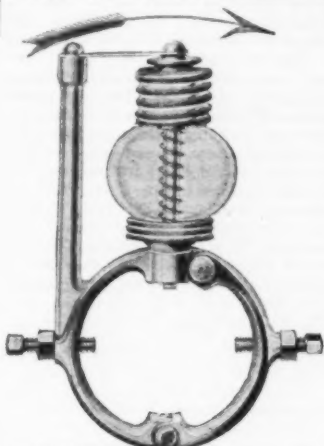
LOOSE-PULLEY LUBRICATOR.

throw oil over the ceiling and surrounding machinery or run dry. In order to provide equal and satisfactory lubrication for loose pulleys there has been devised the attachment shown by the accompanying illustration. This device is made of best materials and by high-grade workmanship. It is seen from the illustration that a malleable iron ring fits around the hub of the pulley and is fastened by setscrews at each side. This ring is jointed so that it can be placed in position without removing the pulley from the shaft. In the application of this device no extra drilling, tapping or reaming, no disarrangement of pulleys or shafting is necessary; all that is required is an oil hole in the pulley. The oil cup fits into the socket at the lower end and is held in place by the spring clip fitted over the upper end of the cup. The nozzle of the oil cup is placed over the oil hole in the hub of the pulley, with the feed tube extending down into the hole, but free from pressure. When the pulley is at rest the coiled spring presses the lead button against the nozzle of the oiler and throws the ports in the feed tube out of register with the ports in the upper brass cap, so that no oil can flow from the cup, no matter in what position it stops. When running the centrifugal force of the lead button and feed tube compresses the spring and the openings in the tube register with openings in the cup, so that the oil can pass from the body of the cup into the tube. The centrifugal force acting on the oil will prevent it flowing out of the nozzle around the lead button, but the great mass of oil in the body of the cup acts to set up pressure against the smaller amount of oil inside the feed tube and thus forces the oil slowly into the oil hole. The combined area of the ports in the cap are about twice the area of discharge in the feed tube, and makes this action by centrifugal pressure possible. This lubricator can be used in connection with eccentric strap, cross-head or wrist pin, many cases permitting of its application. This is the Gem Loose-Pulley Lubricator, manufactured by the Gem Manufacturing Co., Spruce, near Twenty-third street, Pittsburg, Pa.

## A Brewery's Electrical Equipment.

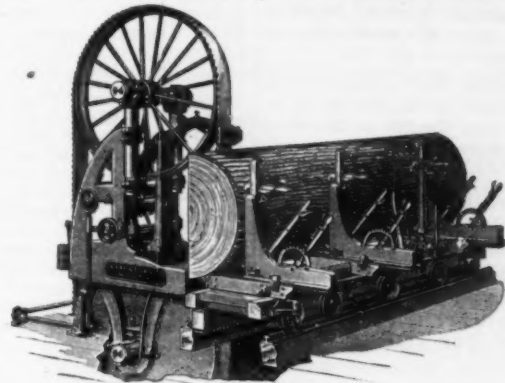
An interesting industrial plant, from a mechanical standpoint, is that of the Orange Brewery Co., at Orange, N. J., which has an annual output of 80,000 barrels of beer.

The buildings are constructed after the plans that have been suggested from past experience by expert architects in this kind of work. All the machinery is of the latest designs for manufacturing high-grade product on the most economical basis, and some ingenious devices are used in several of the departments. The electric generating plant for light and power was built and installed by the



connected to either generator. At the bottom of the board there are two 300-ampere, three-pole, single-throw switches for connecting the generators with the bus-bars, and two single-pole circuit-breakers, one in the negative of each of the generator connections. The field regulating rheostats are directly above the main switches and circuit-breakers, while above the rheostats and below the meters are the distributing feeder switches.

Co. of Williamsport, Pa.; sectional shak-ing grates by the United States Grate Bar Co. of Elizabeth, N. J.; Oscar Beyer of Chicago was the architect for the buildings; Messrs. Charles Kaester & Co. of Chicago were contractors for the conveying apparatus; the De La Vergne Refrigerating Machine Co. of New York for the entire refrigerating system, and the Crocker-Wheeler Co. of Ampere, N. J., for the generators and all electric motors



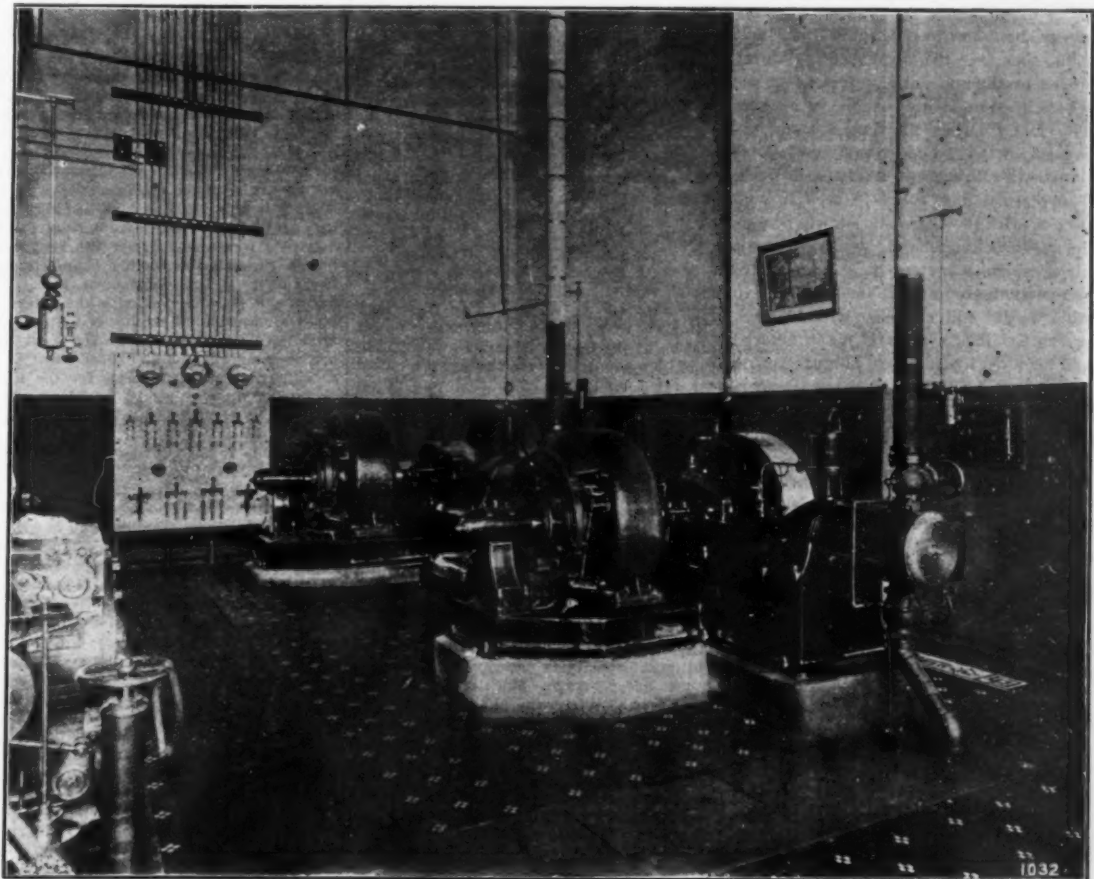
NEW BAND MILL.

These from left to right are as follows: A 25-ampere switch controlling the current to the engine and boiler-rooms; a 100-ampere switch for the machine-house and filter-room; a 100-ampere switch for the brew and stock rooms; a 300-ampere switch for all brewhouse motors; a 100-ampere switch for the bottling-house and office; a 100-ampere switch for the wash and freezing rooms, and a 25-ampere switch for the stable and barns.

except those included with machinery under special contracts.

## No. 57 Band-Saw Mill.

It required long and continued effort to bring the band mill herewith illustrated to its present state of mechanical perfection. It was patented September 18, 1900, and October 30, 1900, and careful attention is invited to some of its most important points:



CROCKER-WHEELER ELECTRICAL EQUIPMENT IN BREWERY.

for lighting a total of some 250 incandescent lamps and supplying power to thirteen motors representing an aggregate of 123 horse-power.

The switchboard, shown in the accompanying view of the engine-room, contains two ammeters—one for each generator—and a voltmeter, with a double-point switch, by which it may be con-

To keep the water (chilled to about 32 degrees Fahr.) in the fermenting vats in circulation there is a centrifugal pump direct-connected to a Crocker-Wheeler bipolar motor of two horse-power running at 975 revolutions per minute and pumping against a pressure of about eighteen pounds.

Boilers were supplied by the E. Keeler

The great saving in kerf by using a thin blade, an important item when cutting fine lumber.

Solid lower wheels, increasing speed, lessening the circulation of dust and preventing the upper wheel from over-running it, upper wheel having its spokes placed in staggering position, giving it increased solidity.

Improved sensitive straining device, maintaining an always even tension on saw blade and materially prolonging its life.

Patent variable friction feed, simple in construction, powerful and effective in operation; furnished for steam or rack and pinion.

Automatic off-set to carriage, head-blocks fitted with Knight's patent dogs and having automatic receding device, double-acting set works, rapid return to carriage, etc., are a few more of its improved features.

Those interested will be furnished with further particulars by the makers, J. A. Fay & Egan Co., No. 270 to 290 West Front street, Cincinnati, Ohio.

#### Dust-Collecting Systems.

There are various kinds of manufacturing plants which utilize machinery that produces dust. This dust may be from woodworking machines, pulp and paper equipment, fertilizer machinery, textile machines and many other kinds of mechanical apparatus used in modern industry. The presence of this dust was formerly a great nuisance in and around manufacturing plants until modern ingenuity produced an equipment for obviating the objectionable conditions. It is not necessary to give a history of the development of dust-collecting systems, but they have grown from small beginnings, as have so many other kinds of up-to-date machines. These dust-collecting systems have been so far perfected that many plants throughout the United States have them installed and are using them with great success. The modern dust-collecting system is applicable to saw and planing mills, woodworking factories of all kinds, polishing and buffing rooms, tumbling barrels, pulp and paper mills, shoe factories, dyehouses, fertilizer works, textile mills, and, in fact, all places where dust-producing machinery is used. The Dixie Dust-Collecting System has earned for itself a most enviable reputation in this branch of mechanical work. The especial dust collector used in connection with the Dixie system will deposit the shavings and dust in the vault without air pressure, allowing the purified air to escape at the top and allowing the fan to work to its full capacity without back pressure. This system is manufactured and installed by the Dixie Manufacturing Co., of Baltimore, Md., mechanical expert in the removal of shavings, dust, lint, odors, etc.

#### TRADE NOTES.

**Sand and Gravel Bench.**—Parties who may be seeking a sand and gravel property are advised to address P. O. Box 180, Portsmouth, Va. They can thus obtain particulars concerning a 35-acre sand and gravel bench, which can be developed, located twenty-two miles from Norfolk.

**Risdon's Washington Office.**—It is announced that Hugh C. Risdon, the well-known industrial promoter, has established an office at 431 Bond Building, Washington, D. C. Mr. Risdon is well known for his work in locating industries and in organizing and financing legitimate enterprises to be established in the South.

**Outing for Codd's Employees.**—The well-known boiler-makers and machinists, the E. J. Codd Company of Baltimore, has planned an outing for its employees. A steamer has been chartered and on September 12 will take the employees to Fairview, on Chesapeake bay, where a delightful day's pleasure is anticipated by the men. Such occasions as these are always pleasant to refer to as indicating the cordial relations between employer and employee in industrial plants.

**Zelicker's Machinery Bulletin.**—Buyers of railroad equipment, machinery generally, mill supplies, etc., will be interested to know that the Walter A. Zelicker Supply Co. of St. Louis issues a daily bulletin of the equipment it has for sale at various cities in the United States. The company at present has a large quantity of 50 and 55-pound relaying

ralls for prompt shipment, new and second-hand. Zelicker branches are located at Chicago, Seattle, Mobile, New Orleans and Houston.

**Offers Coal Lands.**—Western Kentucky coal lands, much of which is in forest from which the timber can be taken, offer good opportunities for investors and parties desirous of undertaking developments. There are properties in the section which can now be purchased. Particulars concerning these lands, especially a 1100-acre tract, 800 acres being in forest, can be obtained by addressing A. H. Reed, 532 N. Seventh street, Paducah, Ky. No one thinking of buying this character of mineral property can afford to neglect being informed as to the Reed offerings.

**Petty Machine Co.**—This is a new Southern enterprise, which anticipates meeting with great favor throughout the section tributary to its location at Burlington, N. C. An up-to-date plant for general machine work for some time under construction is now being put in operation prepared for general machine work, overhauling engines and making a specialty of cotton-mill work. J. W. Cates is president; W. L. Cates, secretary, and W. E. Petty, general manager, of the Petty Machine Co. They are prepared to negotiate regarding large or small contracts in their line.

**Wrecking Train and Car.**—Contractors or others who are likely to want a 15-ton steel-car wrecking train are advised to note that an equipment of this character is offered for sale by the Walter A. Zelicker Supply Co. The equipment can be obtained at a bargain price. It has been completed only a few weeks, and has not been in use. The Zelicker lists for September 1 show numerous other offerings in the machinery line. All kinds of woodworking and ironworking machines, contractors' plant, railway equipment and supplies, mill furnishings, etc., are quoted. Company's offices are at 408 N. Fourth street, St. Louis, Mo.

**Gem Patented Specialties.**—Mills, factories, industrial establishments and the trade are reminded that the Gem Manufacturing Co.'s patented specialties, of which it is the sole manufacturer, and also the general supplies added to the line, are highest grade in both workmanship and material. The company takes pride in the fact that it has established a reputation for quality, combined with promptness and courteous business dealings, which reputation will be jealously guarded. It is prepared to furnish estimates on special articles stamped or drawn from sheet steel or brass, also on dies and mold work. Main offices, Spruce near Thirty-third street, Pittsburg, Pa.

**World's Record in Coal Hoisting.**—It is stated that the coal-handling machinery installed by the C. W. Hunt Co., West New Brighton, N. Y., at the Lincoln wharf power station of the Boston (Mass.) Elevated Railroad Co. recently lowered the world's record for rapid unloading. The coal was raised ninety feet above tidewater and delivered to the storage pockets at the rate of 320 tons per hour. The installation follows in general design the standard Hunt steeple tower rig, the moving gear and coal cracker being electrically driven and the hoisting engine direct connected. The overhang of the folding boom is forty feet, and the capacity of the shovel two tons.

**Doubled Plant's Capacity.**—The Louisville Elevator Co., formerly the Louisville Foundry & Machine Co., Louisville, Ky., has lately been adding new tools to its factory until the capacity is now just double what it was one year ago. Since taking the contract for the thirty-nine hydraulic elevators to be installed in the terminal station in St. Louis, the company has gradually come to the front as an elevator manufacturer. Contracts have been secured for eight electric machines to be installed in Los Angeles, Cal., three of which are to go into the magnificent Chamber of Commerce Building. This speaks highly of Louisville as a manufacturing center, in that these people can successfully compete at such a distance from home with other manufacturers in their own territory.

**Contract for 400-Mile Railroad.**—The extent of the contracts undertaken by Arthur Koppel of New York city is clearly shown in the latest contract signed. This contract is for building and equipping a narrow-gauge railroad about 400 miles long for the Otavi Mining & Railroad Co. The railroad is to be used in the service of the copper mines in the district Otavi and Tsumeb, in Southwestern Africa. The total cost of building the road is approximately \$4,500,000. The firm of Arthur Koppel has formed a company with several of the first German banks

to build this road, which has to be finished within two and one-half years. Arthur Koppel builds and equips the road complete, including rails, steel ties, rolling stock and all the other equipment. By one of the last steamers fifteen engineers of the firm left Hamburg for Southwestern Africa in order to begin the work.

**The Wilkinson Stoker.**—John A. Caldwell, general sales manager of the Wilkinson Stoker Co., offices 45 Broadway, New York, relates the following recent sales: Two 200 horse-power, Ridgway Machine Tool Co., Ridgway, Pa.; four 175 horse-power, Reading Water-Works, Reading, Pa. (third order); ten 375 horse-power, Pittsburg Plate Glass Co. (replacing another of similar appearance); three 350 horse-power, Chamber of Commerce Building, Rochester, N. Y.; two 200 horse-power, New Willard's Hotel, Washington, D. C.—all of above for use with soft coal; thirteen 300 horse-power, Federal Sugar Refining Co., Yonkers, N. Y.; two 300 horse-power, Schwarzschild & Sulzberger, New York; four 300 horse-power, the Belleville Stratford Hotel, Philadelphia, Pa.; ten 200 horse-power, the American Tube & Stamping Co., Bridgeport, Conn.—all of the latter for use with anthracite buckwheat coal.

**Enlarging Dow Wire Works.**—Increased demands for its product makes it necessary that the Dow Wire Works Co. of Louisville, Ky., enlarge its already extensive plant. A factory located on three acres of ground, with railroad switch, in the city limits, has been secured, and facilities will be largely increased, since the company will now have about 75,000 square feet of floor space. Two large boilers and engines have been secured, also shafting and heating apparatus, which are already in place, and the company expects to have its machinery moved into new quarters within sixty days. The Dow Wire Works Co. is one of the largest industrial plants of its kind in the South, and it is handling a large trade in that section, besides sending a lot of its product to other territory. It makes artistic steel and bronze work for banks, elevator cabs and enclosures, ornamental iron drills, wire office railings, wickets, gates, etc.

**Carolina Fire-Brick Works.**—This plant is one of the representative industries of its character in the South, and for some years has been supplying large quantities of high-grade fire-brick in all standard sizes, fire clay and glass sand, special shapes of any design, etc. The Carolina Fire-Brick Co. finds that the urgent demand for its product necessitates increased facilities, and improvements are now being made to the plant. New machinery is being installed with daily capacity of 60,000 bricks, and there is being erected a hot-air waste-heat dryer, the heat to be drawn through the cooling chambers of a 19-chamber Haigh continuous kiln. The dryer will be equipped with the latest devices for economical drying of material. It is claimed that this will be the most thoroughly-equipped and up-to-date plant of its kind in the Southern States for the manufacture of fire-clay goods, machine or hand made. The plant is located at Killian, S. C.

**To Whom It May Concern.**—The following letter is interesting: "In December of 1901 I gave the Philip Carey Manufacturing Co. an order to furnish and apply its 85 per cent. magnesia sectional covering and cement on my live steam and return pipes and connections, including two 125-horse-power boilers, connected with three Ames 30-horse-power engines, one 30-horse-power Westinghouse engine, two 8-horse-power compound elevator pumps, size 12x18x8x12; one boiler-feed pump, size 6x12x6; one house-service pump 6x12x6, one drinking-water pump 3½x2½, and one well pump 4x3½x5. The total cost of material and labor for covering on this work was \$486.50. In exactly one year from completion of covering work I made a reduction in my fuel bill of \$1429.43, or about \$119.12 per month, besides reducing the temperature of my engine-room from 130° to 98° in the summer time. This statement can be verified by examination of our books, which will be gladly shown to any of my brother engineers. Very truly, The White Fireproof Office Building, per E. A. Carter, chief engineer." Philip Carey Manufacturing Co. is at Lockport, N. Y.

**Wesco Supply Co.**—This company announces that it has acquired and will continue the supply business of the Western Electrical Supply Co., St. Louis, Mo. R. V. Scudder is vice-president and general manager of the new enterprise. The Western Electrical Supply Co. states that the rapid growth of its business made it advisable to increase the cash capital and divide said business into two parts. That portion relating to electrical supplies has been sold to the

Wesco Supply Co., as above stated, which will be under the personal management of Mr. Scudder. The other branch—the building of electric-light plants and electric railways—will be retained by the Western Company, which now has on hand contracts in this department amounting to nearly \$1,000,000. Hereafter the Western Company will restrict itself to this branch. H. K. Gilman will continue to be the manager, with offices in Chemical Building, St. Louis, and he will also retain an interest in and be a director of the Wesco organization. The Western Electrical Supply Co. expects to increase its capital to \$300,000 soon and discount all future purchases.

**Electric Power in Candy Factory.**—The extensive factory of the Loose-Wiley Cracker & Candy Co. of Kansas City has been completed, and its electrical equipment is an interesting installation. A modern mill building six stories high, 123x184 feet, is used. The power equipment embraces one 75-kilowatt and one 100-kilowatt Westinghouse generator connected to straight-line high-speed engines. There are also a number of Westinghouse motors in position. The current supplied to these motors at 110 volts is conveyed from the switchboard by rubber-covered cables; the power is economically distributed, a separate motor being provided for each department. All motors are suspended from the ceiling and connected to the machinery by belts. The switchboard apparatus is also of Westinghouse manufacture. The connections between switchboard and generators are such as to allow the operation of either generator for power or light exclusively, or both generators may be used for light and power at the same time. The boiler plant consists of six P. Delany & Co. tubular boilers, each 60 inches in diameter by 16 feet long, equipped with Roney mechanical stokers. All of the apparatus in the plant was installed by the Reed-Squires Electric Co. of Kansas City.

**American Granite Brick Co.**—This corporation has recently been chartered and secured control of a Southern territory for the Hunnekes system of manufacturing sand-lime building bricks. The company's territory covers the District of Columbia, Virginia, South Carolina, Georgia, Florida, the greater part of North Carolina, much of Alabama and parts of Pennsylvania and Maryland. This valuable territory abounds in sand of the very best quality and in suitable material for making lime. These two are the chief materials requisite for making unexcelled brick of natural bright and light colors. The superior advantages of manufacturing sand-lime building brick have frequently been referred to in the press during the past several years. Manufacturing by the new system is rapidly becoming an important industry in this country, and doubtless the American Granite Brick Co. will through its efforts give great impetus to the progress of the Hunnekes system. E. C. Wood is president of the company; John P. Martin, vice-president and general manager, and John P. Martin, Jr., secretary. Offices in the Home Life Building, corner Fifteenth and G streets N. W., Washington, D. C. New York office at 114 Liberty street. This company is capitalized at \$500,000.

**Anti-Friction Journal Bearings.**—Those who desire to dispense with oil or lubricant in all journal bearings will be interested in having their attention called to an anti-friction journal bearing now being introduced. The object of this invention is to produce improvements in that class of journal bearings in which friction is reduced to a minimum through the employment of rolling members between a journal or axle and its box, wherein provision is made for the practical elimination of friction between all the bearing parts of the device and the varying conditions in use, whereby all injurious heating by friction is obviated without the use of oil or other lubricants. The invention is applicable to bearing generally, whether the box be stationary and the journal rotative, the axle be fixed and the box rotative, or both be rotative. The device mentioned is the Stickle Anti-Friction Journal Bearing, manufactured by the Stickle Machine Co., N. McKusick, secretary, Williamsport, Pa. Some of the strongest possible statements concerning the efficiency of the bearing as accomplishing what it aims to do have been given the makers. One instance may be quoted. An operator of a mortise machine in a planing mill writes: "Connected with said machine there is a pulley equipped with your bearing running at a speed of 1000 revolutions per minute during working hours. It has been three months since that pulley was attached to my machine, and during this time no oil or other lubricant has been used upon any part of the pulley or its bearing." Write the company for further details.



# CONSTRUCTION DEPARTMENT.

## TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

### EXPLANATORY.

The Manufacturers' Record seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

\*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

### ADDRESS FULLY.

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

### WRITE DIRECTLY.

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

### ALABAMA.

Anniston—Cotton Mill.—Anniston Cordage Co. will install additional spinning and cording machinery in its plant.

Anniston—Brick Plant.—Colonel Locke has purchased, will improve and operate the Duke brick works.

Talladega—Furniture Factory, etc.—Watts Manufacturing Co., recently reported organized with capital of \$10,000, is an enlargement of M. E. Watts & Bro. of Meadow, Ala., and Watts Bros. Manufacturing Co. is correct title. M. E. Watts, Thos. G. Watts, R. S. West of Meadow are the directors. They will erect a plant for producing furniture, building materials, general woodwork, etc.\*

Tuscaloosa—Cotton Compress.—American Cotton Co. will rebuild its roundap-bale plant reported burned at loss of \$11,000.

### ARKANSAS.

Batesville—Furniture Company.—Cook-Crouch Furniture & Hardware Co. has been incorporated, with capital of \$25,000, by John M. Cook, R. A. Dowdy and A. L. Crouch, president, vice-president and secretary-treasurer, respectively.

Clarksville—Coal Mines.—Clarksville Anthracite Coal Co. has been incorporated, as lately reported, for development of coal mines. J. O. Blackard is engineer in charge, and Joe James, architect.\*

Denning—Coal Mines.—Ozark Coal & Mining Co. has been incorporated, with capital of \$30,000, and M. B. Cornater, president; Geo. W. Russell, vice-president, and D. M. McGraw, secretary-treasurer.

England—Water-works.—City is preparing for installation of water-works plant. Address T. J. Hudson.

Fort Smith—Construction Company.—Archer-Foster Construction Co. has been incorporated, with capital of \$10,000, for construction of railroads, bridges, etc., by W. J. Archer, George S. Foster and J. K. Tunnah.

Harrisburg—Mercantile.—Chartered: G. T.

Garvey Company, with capital of \$16,000, by G. T. Garvey and others.

Jacksonport—Improvement Company.—Jacksonport Improvement Co. has been incorporated, with capital of \$25,000, and L. Minor, president; R. W. Anderson, vice-president; E. A. Shaver, secretary, and G. I. Grant, treasurer.

Little Rock—Heating Plant.—Little Rock Heating Co., which will erect and operate the hot-water heating plant under franchise granted by city to Arthur Neill and Oscar Davis, has been organized, with capital of \$250,000, of which \$60,000 has been subscribed. Wm. G. Andrews of Clinton, Iowa, is president; T. L. Cox, vice-president; Arthur Neill, secretary, and Oscar Davis, treasurer. Engineer W. H. Schott of Chicago, Ill., will superintend construction of plant.

Mineral Springs—Stave and Lumber Company.—Lanier Stave & Lumber Co. has been incorporated, with capital of \$50,000, and W. F. Harrison, president; T. J. Dodd, vice-president; G. H. Whitfield, secretary, and J. H. Whitfield, treasurer.

Mt. Hersey—Zinc Mines.—Mt. Hersey Mining Co. has been chartered, as recently reported, for development of 500 acres of zinc lands near Mt. Hersey. No contracts have been awarded nor machinery purchased. Address J. R. Fleming, secretary, Sisseton, O. T. Company's main office is Cleveland, O. T.

Paragould—Educational.—Chartered: Wyse College, with capital of \$25,000, and Richard Jackson, president; W. C. Hasty, vice-president, and M. F. Collier, secretary.

Perryville—Lumber Mill.—McKinniss Shingle Co. has been incorporated, with capital of \$10,000, for manufacture of shingles and lumber, as recently reported, and will later on install 50-horse-power boiler, 35-horse-power engine, molder, matcher, resaw and edger.

Pine Bluff—Hardware Company.—McGaughey Hardware Co. has increased capital from \$10,000 to \$50,000.

Pine Bluff—Ice and Coal Company.—Consumers' Ice & Coal Co. has been incorporated, with capital of \$100,000, and J. F. Rutherford, president; W. D. Hearn, treasurer, and V. O. Alexander, secretary.

Pulaski—Sewerage System.—Chris Ledwige, Maxwell Collin, H. F. Auten and F. B. T. Hollenberg have incorporated Pulaski Sewerage Co., with capital stock of \$10,000, to construct and maintain sewers in the Pulaski Heights district.

Texarkana—Lumber Mill.—Iowa Lumber Co., recently reported incorporated, has mill equipped and in operation; capacity 20,000 to 30,000 feet per day.

### FLORIDA.

Bay City—Saw-mill.—W. R. Peterson of the O'Brien Lumber Co. of O'Brien, Fla., is erecting saw-mill at Bay City.

Bay City—Phosphate Mines.—G. B. Murrell has discovered and will develop phosphate on his property near Bay City.

Irvine—Cannery.—Hall Bros. will erect cannery.

Jacksonville—Saw-mills.—Chartered: C. J. McGehee & Co., for operating saw-mills, etc. The capital stock is \$10,000, and the incorporators are C. J. McGehee, C. A. Anderson, J. F. McClellan and J. L. Jones.

Manatee County—Timber-land Development.—Southern States Land & Timber Co. of New Orleans, La., has purchased 235,000 acres of timber land in Manatee county, and will erect a number of mills for developing the property.

Martel—Lumber Mills.—Martel Lumber Co., lately reported incorporated with capital of \$25,000 for manufacture of lumber, will establish lumber mill with capacity of 30,000 feet per day.

Pensacola—Land Improvement.—Pensacola Land & Improvement Co. will be incorporated, with capital of \$50,000, and privilege of increasing to \$100,000. M. C. Brent will be president; George W. Wright, vice-president, and Thomas C. Watson, secretary.

Tallahassee—Lumber Mills, Naval Stores, etc.—Jasper Manufacturing Co. has been incorporated, with capital of \$20,000, for manufacture of lumber and to deal in naval stores, etc., by J. R. Tuten, C. W. Smith and H. M. Tuten.

### GEORGIA.

Americus—Laundry.—E. L. Hollis, No. 14 Planters' Bank, will establish steam laundry.\*

Athens—Road Improvement.—Clarke con-

ty has voted issue of \$100,000 of bonds for road improvements, previously reported. Address The Mayor.

Athens—Sewerage System.—City has commenced work on construction of its proposed \$20,000 sewerage system, previously reported. Address The Mayor.

Atlanta—Clothing Factory.—Hygien Clothing Co. has been incorporated, with capital of \$1000, by W. H. Wiggs and L. S. Biggar, for manufacture of clothing and underwear.

Atlanta—Cotton-oil Mill.—Grant Bros. Co. has been incorporated, with capital of from \$15,000 to \$100,000, for manufacture of cottonseed and cottonseed products, by Peter G. Grant and Walter T. Colquitt of Atlanta, Daniel Grant of Memphis, Tenn., and others.

Atlanta—Sewerage.—Councilman C. S. Winn, chairman sewer committee, has recommended award of contracts for extension of city sewers, involving an expenditure of \$100,000. Main contract will be awarded Atlanta Construction Co.

Augusta—Lumber Plant.—Jesse Thomson of Swainsboro, Ga., has purchased plant of Youngblood Lumber Co. and will reorganize company and operate the plant.

Carrollton—Telephone Company.—Gainesboro Telephone Co. has increased its capital stock to \$150,000 and will expend \$100,000 on improvements and extensions.

Cartersville—Planing Mill.—Strickland Bros. contemplate erection of planing mill.\*

Columbus—Bottling Plant.—Incorporated: Columbus Coca-Cola Bottling Works, by Columbus Roberts and E. F. Roberts of Columbus, and George C. Roberts, John E. Cobb and George S. Cobb of Alabama, the capital stock to be \$20,000, with privilege of increasing to \$50,000.

Gainesville—Dolomite Mines.—C. D. Schaffer is organizing a company to develop dolomite mines.

Macon—Telephone Extension.—Southern Bell Telephone Co. will extend its line to Cochran, Hawkinsville and Eastman from Macon.

Savannah—Turpentine-box Factory.—Stock company will be organized to establish factory for manufacture of a patent turpentine box invented by Robert L. Gaylord of Clio, Ga.

Thomson—Fertilizer Company.—Chartered: McDuffie Oil & Fertilizer Co.

Thomson—Mercantile.—Chartered: Thomson Mercantile Co.

Waycross—Pants Factory.—Jones Pants Manufacturing Co. has issued \$5000 of additional stock for purpose of making necessary improvements.

### KENTUCKY.

Catlettsburg—Coal Mines.—Norton Branch Coal Co. has been incorporated, with capital of \$2300, by George W. Mitchell, J. D. Mutters, F. E. May and others.

Catlettsburg—Oil and Gas Wells.—Pritchard Oil & Gas Co. has been incorporated, with capital of \$10,000, by M. C. Watson of Louisa, W. L. Watson of Ashland and Kenton Pritchard of Denton.

Cloverport—Machine Shops and Foundry.—Madison L. Christian of Louisville, Ky., has, with others, organized the Christian Machine Shops and Foundry, and will establish plant at Cloverport.

Henderson—Wagon Works.—Coquillard Wagon Works has been removed from South Bend, Ind., to Henderson.

Henderson—Flour Mill.—Kentucky Milling Co. will rebuild its flour mill burned lately and reported to be rebuilt. New company will be organized with capital of \$50,000.\*

Hopkinsville—Manufacturing.—Peerless Manufacturing Co. has been incorporated, with capital of \$10,000, for manufacturing machinery, tools and other patented articles.

Louisville—Mercantile.—Chartered: F. W. Maury & Co., with capital of \$15,000, by F. W. Maury and others.

Louisville—Wire Works.—Dow Wire Works Co. has secured larger factory building and installed additional machinery for increasing capacity.

Louisville—Oil and Gas Company.—Brooks-ville Oil & Gas Co. has increased capital from \$3000 to \$7000.

Maysville—Coal Mines, Coke Ovens, etc.—Great Northern Coal & Coke Co. has been organized, with capital stock of \$10,000,000, by Senator J. N. Camden and Sprigg Camden of Parkersburg, W. Va.; P. L. Kimberly of Sharon, Pa.; F. A. Dinley and Rob-

ert Newton of Chicago, Ill.; George C. Howe, Duluth, Minn., and J. C. Mays of Paintsville, Ky. Company has concluded deal by which it acquired 400,000 acres of coal lands near Maysville, and will inaugurate extensive developments, making a number of openings, constructing railroad distance of ninety miles and building coke ovens. At Maysville will be erected two immense steel coal tips equipped with latest machinery and devices for unloading from cars to barges; several mining companies for operating the different openings, transportation company and selling company will be organized, each a separate organization with different offices. Cincinnati will be headquarters of the selling company, and offices of the parent company, the Great Northern Coal & Coke Co. will be in New York, but for present Senator J. N. Camden, Parkersburg, W. Va., can give particulars. Referring to the above, Senator Camden wires the Manufacturers' Record as follows: "We have recently purchased a field of about 350,000 acres on the waters of the Big Sandy in Eastern Kentucky of the finest fuel and coking coal in the United States, but have no plans for its development at present."

Morgantown—Electric-light Plant and Water-works.—J. M. Carson has franchise for erection of electric-light plant and construction of system of water-works.

Owensboro—Foundry.—Southern Foundry Co. will rebuild foundry recently burned at loss of \$10,000.

Princeton—Oil and Gas Wells.—E. Young Oil & Gas Co. has been incorporated, with capital of \$100,000, by E. Young, John C. Gates and M. J. Groom, all of Princeton, for development of oil, gas and mineral lands.

Winchester—Lumber Plant.—Chartered: Loveland-Garrett Company, capitalized at \$50,000, which has purchased and will develop 5000 acres of timber land. R. P. Brodhead of Wilkesbarre, Pa.; C. H. Loveland of Mt. Sterling, Ky., and H. G. Garrett of Winchester, Ky., are the incorporators.

### LOUISIANA.

Clinton—Lumber Plant.—Clinton Lumber Co., Ltd., has been chartered, acquired pine timber lands, and will build saw and planing mills; motive power of mill will be electricity. F. J. Harris is president; D. J. Anders, secretary, and L. M. McKnight, manager.

Jeanerette—Lumber Mill.—Salt Water Lumber Co., Limited, has been incorporated with capital of \$100,000 and H. Patout, president; J. B. Brown, vice-president, and Willis Patout, secretary-treasurer.

New Orleans—Canal.—Alabama Coal & Transportation Co., with headquarters in New York, has leased and will operate the Lake Borgne canal. The Alabama Company, which controls large coal mines in Alabama, proposes to ship its coal to New Orleans through the canal, and will open offices in New Orleans through which the affairs of the canal will be controlled.

New Orleans—Oil Refinery.—National Oil Works & Mill Supply Co., P. A. Cooney, manager, has purchased 100 acres of land as site and has completed all arrangements for establishment of its proposed oil refinery, which will have capacity of 500 barrels per day.

New Orleans—Trunk Factory.—New Orleans Trunk Co., Limited, H. Davis, proprietor, will install additional machinery for increasing capacity of his trunk factory.

Rayne—Rice Mill.—Jefferson D. Marks of Crowley, La., and associates have purchased the Arcadia Rice Mill at Rayne, as recently reported, and will operate as the Ida Rice Mill. Ed Burgess is engineer in charge; J. A. Pitty, Crowley, architect; size of building 160x90 feet, and capital to be invested \$50,000.\*

Whitecastle—Water-works.—City will issue \$50,000 of bonds for construction of system of water-works. Address The Mayor.

### MARYLAND.

Baltimore—Real Estate.—C. E. Spalding Co. has been incorporated, with capital of \$10,000, by Chas. E. Spalding, Robert K. Kneass, James McEvoy, Jr., and others.

Baltimore—Brick Plant.—Representatives of the Montello Brick Co. of Reading, Pa., are investigating with view to establishing \$200,000 brick plant at Baltimore.

Baltimore—Gas Plant.—Joseph Schrelber, president of the Highlandtown Gaslight Co., and reported recently as having been granted franchise for construction of gas plant at Highlandtown, has awarded contract for

erection of same to Frank Long; buildings will include retort houses, office buildings, engine houses and other structures; large gasometers will also be constructed and gas mains laid. Entire cost of plant will be \$500,000.

Cockeysville—Flour Mill.—Holland & O'Neal will rebuild flour mill reported burned; building will be 40x50 feet and capacity will be seventy-five barrels.\*

Mount Savage—Coal Mines.—Edgar W. Day, Wm. B. Faringer, Joseph A. McGaghey, Alfred Stevens and Clinton E. Vansant, all of Baltimore, Md., have incorporated the Mount Union Big Vein Coal Co. for development of coal property near Mount Savage.

Washington, D. C.—Brick Works.—American Granite Brick Co., recently chartered with capital stock of \$350,000, controls a large Southern territory for the Huennekes system of manufacturing sand-lime building bricks. Preparations are being made to build a large plant at Washington, to be followed by others at Baltimore, Norfolk, Richmond, Raleigh, Charleston, Atlanta, Savannah, Montgomery, Mobile, Jacksonville and other Southern cities. E. C. Wood is president; John P. Martin, vice-president and general manager, and John P. Martin, Jr., secretary. Main offices at Nos. 2125 Home Life Building, Fifteenth and G streets N. W.

#### MISSISSIPPI.

Centerville—Soap Factory.—L. B. Robinson is organizing \$25,000 company for establishment of soap factory.

Ellisville—Water-works.—City voted issuance of \$30,000 of bonds for construction of water-works recently reported. Address The Mayor.

Greenville—Timberland Development, Saw-mill, etc.—Chicago-Mississippi Land & Lumber Co., reported recently as incorporated with capital stock of \$400,000, has organized for conducting lumber business and developing the property which it has purchased in the State of Mississippi and elsewhere. Company will erect at once a band mill on the property, contracts for which are now being considered. Address F. B. McMullen, treasurer, 123-125 La Salle street, Chicago, Ill.

Heidelberg—Cotton Gin.—Company reported recently to be organized by K. C. Hall and others for erection of cotton gin has been incorporated as the Heidelberg Ginnery & Warehouse Co., with capital of \$5000. Among other incorporators are T. M. Heidelberg, R. P. Clayton and others. E. M. Lyon of Heidelberg is engineer; R. Archer, Laurel, Miss., architect. Capacity will be forty bales of cotton per day.

Jackson—Electric Plant.—Capital Light & Power Co. is increasing the capital stock from \$25,000 to \$50,000, having concluded to establish a larger plant than originally contemplated. Contract for erecting the powerhouse was reported in July as awarded to J. C. Landen.

Magnolia—Water-works.—City will vote October 6 on issue of the \$25,000 of bonds for construction of water-works previously mentioned. Address The Mayor.

#### MISSOURI.

Chillicothe—Box Factory.—Chillicothe Box Manufacturing Co. has been incorporated, with capital of \$25,000, by N. E. Kidder, Frank Adams, Glen E. David and others.

Jefferson City—Paving and Sewerage.—The city will construct sewers in three districts, mains for which are built and 8 to 12-inch pipe will be used. Surveys and plans are now being made. City will also pave about 15,000 square yards with macadam, along which will be about 10,000 lineal feet of granite curb and gutter, and about 37,000 square feet of granite sidewalk. Part of this is open for bids, and the rest will be as soon as the grading is done. Eight blocks of business district, comprising about 24,000 square yards, will be paved this fall with brick or asphalt, as decided by committee to meet this week. J. C. Herring is city engineer.\*

Kansas City—Advertising Company.—Flash Advertising Co. has been incorporated, with capital of \$50,000, by H. A. De Forrest, G. H. Deshon, E. E. Evans and others.

Kansas City—Bridge.—Chicago Great Western Railroad Co. has awarded contracts for construction of its proposed \$300,000 bridge over Kaw river. Contract for piers has been awarded Kahmann & McMurray of Kansas City, and steelwork will be done by Pittsburgh (Pa.) Bridge Co.

Kennett—Drainage and Improvement Company.—St. Francis Basin Improvement Association has been organized for the purpose of securing the drainage and improvement of the nineteen counties of Arkansas and Missouri penetrated by the St. Francis river and

tributaries. John A. Fox of Mississippi county, Arkansas, is temporary secretary.

Poplar Bluff—Typewriter Factory.—Company reported recently to be organized for manufacturing new machine to be known as the addograph has incorporated as the Adding Typewriter Co. and will establish plant at once. Superintendent who will have charge of plant is Sam G. Dorman, and may be addressed Room 55, Gay Building, St. Louis, Mo.

St. Louis—Agricultural-implement Factory. Waters-Barber-Treese Company has been incorporated, with capital of \$10,000, for manufacture of farming implements, wagons, etc., by William Waters, Cleere Barber, W. H. Treese and others.

St. Louis—Realty Company.—Victor Realty Co. has been incorporated, with capital of \$5000, by S. J. Russack, Chas. Wittenberg, Samuel Gross and others.

St. Louis—Milling.—Chartered: Saxony Mills, with capital of \$100,000, for conducting general milling business, by R. H. Leonhardt, J. F. Schuricht, A. T. Leonhardt and others.

St. Louis—Resort.—Montesano Health Resort Co. has been incorporated, with capital stock of \$200,000, by William H. Thorweng, Noel Poepping, O. F. Doering, H. G. Oheim and M. T. Chestnut.

St. Louis—Investment Company.—Hoffman Investment Co. has been incorporated, with capital of \$80,000, by G. A. Hoffman, H. C. Kelly, William Gerding and others, for dealing in real estate, etc.

St. Louis—Gate Company.—International Starting Gate Co. has been chartered, with capital of \$5000, by F. A. Siefert, A. H. Bibb, E. S. Waer and others.

St. Louis—Hardware Specialty Company.—National Hardware Specialty Co. has been incorporated, with capital of \$20,000, by C. R. Zschau, H. R. Hetlage, R. A. Jones and others.

St. Louis—Sewerage.—Parker-Washington Company has contract at \$80,000 for constructing the Blackstone district sewers. M. A. Hogan has contract at \$5000 for North Market street sewer.

#### NORTH CAROLINA.

Asheville—Lumber Mills.—Incorporated: Lambert-Murray Company, to operate saw-mills, shingle mills, dry-kilns, etc. The capital stock authorized is \$50,000. George H. Lambert of Asheville, E. P. Murray of Henderson, N. C., and H. F. Addicks, Jr., of Asheville are the incorporators.

Benson—Telephone Company.—Benson Telephone Co. has been incorporated, with capital of \$10,000, by R. F. Smith, W. H. Smith, G. W. Cavanaugh, J. W. Benson and others.

Burlington—Machine Works.—The Petty Machine Co. is putting in operation its new plant, under construction for some time, for general machine-working business; J. W. Cates, president; W. L. Cates, secretary; W. E. Petty, general manager.

Burlington—Gold Mine.—W. G. Teague is developing gold-bearing properties near Burlington.

Greensboro—Cotton Mill.—Site has been purchased for the \$250,000 cotton mill lately reported to be built by W. I. Young, 1020 Empire Building, Atlanta, Ga., and associates. Construction work will not be begun for sixty or ninety days. J. E. Sirrine of Greenville, S. C., will be mill architect and engineer. No further details as to plant are ready for announcement.

Inez—Mattress Factory.—J. H. Marshall will establish a mattress factory.\*

Lexington—Paper-quilt Factory.—National Fiber & Paper Quilt Co. has been organized by D. W. Bagley, D. F. Conrad and J. W. Crowell, for the manufacture of paper bed quilts.

Mocksville—Woodworking Factory.—Davie Manufacturing Co. has been incorporated, with capital of \$10,000, for manufacture of furniture, desks, tables, coffins, etc., by C. M. Gallaher and A. T. Grant, Jr., of Mocksville, T. E. Proctor of Martinsville, Va., and others.

Raleigh—Telephone Extension.—Raleigh Telephone Co. will extend its system to Lillington.

Raleigh—Beverage Factory.—The Cel-I-ko Company has been incorporated, with capital of \$20,000, and privilege of increasing to \$50,000, for manufacture of non-alcoholic beverages. W. W. Mills, W. Birch Douglass, Thos. B. Womack, Wm. Hayes and W. C. Douglass are the incorporators.

Winston—Knitting Mill.—P. H. Hanes, P. H. Hanes, Jr., and Wm. M. Hanes have incorporated the P. H. Hanes Knitting Co., with capital stock of \$250,000, to operate knitting mills.

#### SOUTH CAROLINA.

Anderson—Live-stock Company.—Chartered: Fretwell-Hanks Live-Stock Co., with capital of \$20,000, by J. J. Fretwell, Monroe Hanks and others.

Cheraw—Packery.—Standard Fruit Packing Co. has been incorporated, with capital of \$30,000, by F. Q. O'Neill, N. H. Bitch and W. C. Geraty.

Cheraw—Door and Sash Factory.—Cheraw Door & Sash Co. has been incorporated, with capital of \$20,000, by W. F. Stevenson, D. S. Mathewson, Wm. Godfrey and others. Wm. Godfrey & Co. were reported recently to erect planing mill.

Columbia—Ice Plant.—Columbia Ice & Fuel Co. will install 25-ton ice machine for increasing capacity of its plant.

Denmark—Mercantile.—Denmark Dry Goods Co. has been incorporated, with capital of \$3000, by J. A. Creighton and others.

Georgetown—Water-works and Sewerage.—City will construct system of water-works and sewerage at cost of \$75,000, as lately reported. J. L. Ludlow of Winston, N. C., is engineer in charge of work, and may be addressed.

Greenville—Water-power Development.—Eastern capitalists have organized the Southern Water-Power Co., with capitalization of \$2,000,000, and have had surveys made for development of six different water-powers for transmission of electric power to Greenville and other towns within a distance of fifty miles. It is said that 20,000 horse-power is available.

Landsford—Water-power Development.—The American Development Co. of North Carolina, recently incorporated with capital stock of \$1,000,000, and B. N. Duke of New York, president; Geo. W. Watts of Durham, N. C., treasurer, and J. E. Stagg of Durham, N. C., secretary, will, it is reported, develop the Catawba falls below Landsford and transmit electric power for manufacturing purposes. J. E. McDonald of Winnsboro, S. C., is the agent for the company in State of South Carolina.

Spartanburg—Furniture Factory.—A \$25,000 stock company has been organized to build a furniture factory. J. C. Cauley of Mt. Airy, N. C., is to superintend the construction of plant.

Sumter—Improvement Company.—Afro-American Improvement Co. has been incorporated, with capital of \$10,000, by P. E. Capers, G. W. Murray and M. J. Frederick.

Warrenville—Bottling Plant.—The Artesian Bottle Works has been established by James Crocker and S. W. Howland.\*

Yorkville—Mercantile.—Chartered: Strauss-Smith Mercantile Co., with capital of \$8000, by H. C. Strauss and others.

#### TENNESSEE.

Ashwood—Phosphate Mines.—Century Phosphate Co. has purchased 800 acres of phosphate lands near Ashwood.

Bledsoe County—Timberland Development.—W. D. Young & Son of Bolivar, N. Y., have purchased 2000 acres of timber land in Bledsoe county, and will erect two saw-mills for converting the timber into lumber.

Bristol—Bakery.—C. L. Huffman of Somerset, Ky., is investigating with a view to establishing bakery in Bristol.

Carthage—Tobacco Factory.—Carthage Tobacco Works has increased capital from \$5000 to \$10,000.

Chattanooga—Lumber Mills.—Willingham Lumber Co. contemplates further enlargement and improvements of its lumber mills.

Clinton—Road Improvement.—Anderson county has decided affirmatively issue of \$100,000 of bonds for road improvements. Address County Clerk.

Cohutta (not a postoffice)—Stone Quarry.—J. C. Truce of Chattanooga, Tenn., has purchased and will operate brownstone quarry near Cohutta.

Columbia—Incubator Factory.—J. B. Ranney of Bellefontaine, Ohio, is investigating with view to organizing \$25,000 stock company for manufacture of incubators, and if successful will purchase the Seaver & Worley mill property and machinery, which can be used for manufacture of incubators.

Dickson—Ice Factory.—R. Simon, proprietor of the Dickson Bottling Works, will erect ice factory.

Franklin—Water-works.—City has ordered election September 30 to vote on issuing bonds for construction of water-works. Legislature previously granted authority for bonds, limiting the amount to \$50,000. Address The Mayor.

Johnson City—Telephone Improvements.—Bristol (Tenn.) Telephone Co. will make improvements to its Johnson City system.

Knoxville—Mattress Factory.—Proctor Furniture Co. will rebuild mattress factory reported burned at loss of \$3000.

Knoxville—Oak-extract Plant.—Southern Oak Extract Co. will enlarge its plant, and has contracted for considerable machinery. New buildings have been constructed, 600-horse-power steam plant is being installed, and an evaporating plant costing \$18,000 is being added.

Memphis—Wire-buckle Factory.—Standard Bale Wire Buckle Co., Weatherford, Texas, has established wire-buckle factory in Memphis, as recently reported.

Memphis—Clothing Company.—W. M. Wheeler of Pontotoc, Miss.; W. T. Adams of Corinth, Miss.; W. T. Thomas of Plantersville, Miss., and others have organized the Wheeler Clothing Co., with capital of \$100,000, for conducting general clothing business in Memphis.

Memphis—Shoe Factory.—Caruthers Jones Shoe Co., Caruthers Jones, president, has purchased shoe factory at Kansas City, Mo., which will be removed to Memphis and operated in connection with present plant, greatly increasing capacity of same.

Memphis—Levee Improvements.—O. N. Kilough, president, and Harry N. Pharr, chief engineer, of the St. Francis levee board, have awarded contract to M. J. Roach & Co. of Memphis at \$170,000 for all the levee improvements contemplated.

Nashville—Coal Company.—Chartered: Patton Coal Co., capital stock \$20,000, by C. M. Hash, R. A. Patton, J. L. Gaines, W. E. Carter and E. E. Duncan.

Nashville—Coal Mines.—Patton Coal Co. has been incorporated, with capital of \$100,000, by C. W. Hash, P. A. Patton, James W. Gaines, W. E. Carter and others.

New Market—Zinc Mines.—Wooten & Lay have commenced development of zinc carbonates on their property.

Salem—Cornmeal and Feed Mill.—W. M. Balch will erect two-story 60x40-foot corn meal and feed mill of 100 bushels capacity per day.

Sherman Heights—Poultry Farm.—O. J. & F. H. Stephens have purchased property at Sherman Heights, and will engage in the poultry business. Incubator buildings have been erected, and other structures, including henhouses, etc., will be erected at once. Business will be operated as the Stephens Bros. Poultry Raisers.

Waverly—Sheep-raising.—T. R. Meadow, J. R. Morris, J. N. Wright of McEwen, James Lennon of Chicago, Ill.; E. B. Teachout of Huntington, Tenn., and others have organized \$20,000 company and purchased 1600 acres of land near Waverly, and will conduct general sheep-raising industry.

#### TEXAS.

Amarillo—Brick and Stone Company.—Amarillo Artificial Stone & Brick Co. has been incorporated, with capital of \$20,000, for manufacture of artificial stone and brick, by F. M. Putty, Louis Anthony, R. B. Newcome and J. F. Foster.

Amarillo—Water-works.—L. W. Chase and F. W. Ramsey of Cleburne, Texas, and John K. Bryden of Pittsburg, Pa., have purchased plant of the Amarillo Light & Power Co., and will reorganize the company, incorporating as the Amarillo Water, Light & Power Co., with capital of \$100,000. Extensive improvements to water-works system will be made, including laying of six-inch mains and installation of 1,000,000-gallon reservoir in addition to standpipe already built.

Beaumont—Cotton Compress.—Beaumont Compress Co., recently reported incorporated with \$30,000 capital, has let contract to W. C. Whitney for erection of cotton compress; building to be 200x250 feet in size. About \$30,000 will be invested. C. D. Hill is manager.

Beaumont—Paper Mill.—It is reported that company has been organized in Boston with capital of \$150,000 for establishing paper mill in Beaumont. Address President Sam Parks of the Chamber of Commerce.

Beaumont—Grain and Storage Company.—Beaumont Grain & Storage Co. has been incorporated, with capital of \$50,000.

Beaumont—Soap Factory.—E. A. Luck of St. Louis, Mo., inventor of Tripoline, has about completed arrangements for establishment of his proposed plant in Beaumont. Plans have been completed for erection of four-story factory building, and contracts for machinery will soon be awarded; capacity will be 32,000 cases of soap per day. The Tripoline Manufacturing Co. will be organized by Mr. Luck and others, with F. E. Carroll, president; Walter J. Crawford, vice-president; Lewis H. Scurlock, secretary, and J. L. Cunningham, treasurer.

Burkeville—Lumber Company.—Gulf Shore



Lumber Co. has been incorporated, with capital of \$500, for manufacture of lumber, by E. F. Montgomery, E. T. Tisler and J. W. Mattox.

Cameron—Cannery.—F. W. H. Hubert of Minerva, Texas, and associates will establish cannery at a cost of about \$2500.

Corsicana—Hardware.—W. M. Tatum, J. D. Cunningham, Ed. S. McGee and C. C. Cunningham have incorporated W. M. Tatum Hardware Co., with capital stock of \$75,000.

Dallas—Oil Company.—Knight Oil Co. has been incorporated, with capital of \$10,000, by E. G. Knight, R. E. Bryant and F. J. Tholl.

Denison—Water-works.—City contemplates constructing system of water-works. Address The Mayor.

Port Arthur—Street Improvements.—City will vote on issue of \$15,000 of bonds for street improvements. Address The Mayor.

Fort Worth—Furniture, etc.—A. J. Nix, A. M. Young and Ben W. Fouts have incorporated the Nix Furniture & Storage Co., with capital stock of \$10,000.

Houston—Cotton-oil Company.—Houston Cotton Oil Co. has increased capital from \$50,000 to \$100,000.

Houston—Irrigation System.—Tuscarawas County Rice & Irrigation Co. has been incorporated, as recently reported, and will purchase 2000 acres of land in Harris county, Texas, which will be irrigated by means of artesian wells. Machinery and an engineer will be needed. Moling Bros. of Columbus, Ohio, are the agents of the company, and will attend to purchase of machinery and employment of architects, engineers, etc. Company's business address is Uricksville, Ohio.

Mertens—Cotton Gin.—Mertens Gin Co. has been incorporated, with capital of \$10,000, for establishing cotton gin and grist mill, by John R. Gribbin, Ed Woodall, G. L. White and T. G. Hawkins.

Nacogdoches—Telephone System.—City has granted franchise to the Southwestern Telegraph & Telephone Co. for construction of system.

San Antonio—Brick Plants.—Ed D. Steger of Bonham, Texas; D. H. Scott, Harry Bettis and B. J. Baldwin of Paris, Texas, have organized company for the establishment of brick plants in Texas, Oklahoma and Indian Territories, manufacturing a patent sand-lime brick. Company has decided to erect plants at San Antonio, Houston, El Paso and Dallas, these four having combined capacity of 100,000 bricks per day. Work on the San Antonio plant will be commenced at once, machinery having been purchased at cost of \$100,000.

San Antonio—Lime Company.—Leon Lime Co. has been incorporated, with capital of \$25,000, for manufacture of lime, by Otto Wahrmond, E. G. Truehart, Albert Beite; and others.

Sour Lake—Oil Storage, Pipe Line, etc.—Mutual Storage Co., recently organized with capital of \$100,000, has elected R. E. Brooks, president; G. W. Hurd, secretary-treasurer, and C. W. Brooks, general manager. Company has available storage and tankage capacity at Sour Lake amounting to 500,000 barrels, which capacity will be increased to 1,500,000 barrels. Early construction of pipe line from Sour Lake to Beaumont is one of the objects of the company.

Sour Lake—Oil Wells.—Sinclair Oil Co. has been incorporated, with capital of \$16,000, by J. E. Crosbie of Sour Lake, C. E. Anderson of Austin, R. E. Pennington of Beaumont and others.

Sour Lake—Land Improvement.—Sour Lake Land & Improvement Co. has been incorporated, with capital of \$20,000, for dealing in real estate, by J. F. Waynon, R. E. Burt and Otis McGaffey.

Texarkana—Water Company.—Texarkana Springs Water Co. has been incorporated, with capital of \$10,000, by R. W. Rogers of Texarkana, Texas; George Conway, Texarkana, Ark., and E. J. Spencer of St. Louis, Missouri.

Waco—Electrical Supply, etc., Company.—Waco Electrical Supply & Plumbing Co. has increased capital from \$20,000 to \$40,000.

Wichita Falls—Oil and Tanking Company.—Texas Star Oil & Tanking Co. has been incorporated, with capital of \$40,000, to prospect for oil and minerals, by M. Lasker of Galveston, Frank Kell, W. C. Keath of Wichita Falls, M. W. Bewley, Fort Worth, and others.

Woodville—Mercantile.—J. B. Roberts and others have incorporated the Woodville Mercantile Co., with capital stock of \$20,000.

#### VIRGINIA.

Boxwood—Chair Factory.—D. F. Dunlop & Co., manufacturers of plow handles, are adding to their plant the manufacture of chairs.

Max Meadows—Saw-mills.—M. M. Sutherland and associates have purchased 1100 acres of timber lands near Max Meadows, and will build two saw-mills at once.

Norfolk—Bag Factory.—N. Bloch & Co., 37 Nivison street, will establish a burlap-bag factory.

Norfolk—Sewer System.—City contemplates constructing sewer system in seventh ward. Address The Mayor.

Norfolk—Filtration.—Sand Filtration Company of America has been incorporated, with capital stock of \$350,000, and H. C. Everdell, president.

Norfolk—Mercantile.—Griffith-Powell Company has amended charter, changing name to E. J. Griffith Company and increasing capital to \$10,000.

Norfolk—Drug Stores.—MacKimmie Drug Co., for operating a number of drug stores under one management, has been incorporated with capital of \$50,000. J. A. MacKimmie will be president.

Richmond—Shoe Factory.—Stephen Putney Shoe Co. is having plans made for erection of extensive brick and iron shoe factory and two warehouses 130x300 feet each.

Richmond—Settling Basin.—Contracts for proposed settling basin, involving an expenditure of \$348,500, have been awarded as follows: For excavation, to Winston & Co.; for conduit work, to H. H. George of Richmond, and for cement, to the Virginia Portland Cement Co., of which Baldwin & Brown are the local representatives.

Richmond—Water-power-Electrical Development.—Virginia Passenger & Power Co., reported last month as to undertake extensive developments of water-power and the erection of an electric plant for transmission, will at once begin the work. The dam previously mentioned will be forty feet high and create a lake about twelve miles long. About 10,000 horse-power will be obtained for transmission for the company's railways and for manufacturing plants. It is stated that about \$750,000 will be expended.

Riverside—Brick Works, etc.—The American Hygienic Brick-Tile Fireproofing Co., reported several weeks ago under Richmond, Va., as incorporated with capital stock of \$1,000,000, has purchased 168 acres of clay lands with shipping facilities in the vicinity of Washington, D. C., and has brick plant now in operation at Riverside with capacity of 60,000 bricks per day, and additional machinery on ground (but not installed) to increase output to 100,000 bricks per day. Company is about to install plant for manufacture of American hygienic brick-tile under the Anderson patents (owned by the company). Main office is 328 Pennsylvania avenue N. W., Washington, D. C., with branch office at Richmond, Va.

Salem—Woolen Mill, etc.—Wm. Johnston, E. M. Fitzgerald and associates will organize a \$25,000 company to establish woolen mill and trousers factory to replace the enterprise lately burned.

Winchester—Cold-storage Plant.—Miller Storage Co. of Martinsburg, W. Va., will erect cold-storage plant at Winchester.

#### WEST VIRGINIA.

Anstead—Coal Mines, etc.—Nuckolls Coal & Coke Co. has been incorporated, with capital of \$25,000, as lately reported, for development of coal mines; capacity will be 300 tons per day. Address T. C. McVey of the company at Pratt, W. Va.

Fairmont—Marion-Silax Building Stone Co. has been incorporated, with capital of \$25,000, and M. B. Bartlett, president; James H. Leonard, vice-president-general manager, and H. H. Lanham, secretary-treasurer.

Grafton—Fire-brick Works.—Grafton Fire-Brick Co. has applied for charter. It owns several hundred acres of fire-clay, and will develop. Large buildings will be erected and the latest improved machinery installed for making 50,000 brick per day.

Grafton—Telephone System.—Consolidated Telephone Co. has arranged to extend lines to Pittsburg, Waynesburg, Connellsville, Uniontown and Wheeling, the work to be done inside of three months.

Grafton—Woodworking Plant.—R. W. Keeney Company, now operating a box factory, has leased a mill and will at once begin the manufacture of building supplies and inside finishing. The mill is equipped, but some additional machines will be put in.

Moundsville—Cigar Factory.—Chartered: West Virginia Stogie Co., with capital of \$50,000, to manufacture cigarettes, stogies and tobaccos; incorporators, C. A. Weaver, W. W. Smith, M. P. Henderickson and J. F. Francis of Moundsville, and A. F. Francis of Cameron, W. Va. Building will be 36x75 feet.

Raleigh—Lumber Mills.—Chartered: Blue Jay Lumber Co., by P. P. Griffin, Lock

Haven, Pa.; P. C. Lynch, Corry, Pa.; C. I. Goodwin, Dunlop, Pa. Several thousand acres of timber and coal land have been purchased, and the company will erect a modern band-saw mill.

Randolph County—Timber-land Development.—Major Orr and Frank Pierce of Kingwood, W. Va., and M. Judson Orr of Newburg, W. Va., have purchased 558 acres of timber land in Randolph county, and will build mills for manufacture of lumber.

St. Mary's—Lead and Silver Mines.—West Virginia Silver & Lead Mining Co. has been organized for operating lead and silver mines reported recently to be developed by J. W. Hines, F. C. Persival, Wm. Kibbee and M. L. Barren. Capital stock is \$500,000. Address John Hines, president.

Sutton—Gas and Oil Wells.—Bonwell Oil & Gas Co. has been incorporated, with capital stock of \$25,000, for the purpose of drilling for oil and gas. Incorporators are C. E. Bonwell, J. R. Hyer, E. B. Corbin, C. H. Bland and W. C. Swan.

#### INDIAN TERRITORY.

Muskogee—Garment Factory.—Muskogee Garment Manufacturing Co. has been incorporated for manufacture of clothing, as recently reported, and will build two-story factory 50x100 feet; capacity will be fifty dozen garments per day.

#### OKLAHOMA TERRITORY.

Alva—Lumber Mills.—Chartered: Alva Lumber Co., with \$10,000 capital stock, by T. H., M. D. and R. C. Temple.

Dutton—Cotton Ginnery.—Incorporated: Farmers' Cotton Ginning Co., with \$5000 capital stock, by Wiley King, O. L. Frain, C. C. Fisher, Edgar Diehl and John Bryan.

Guthrie—Corn and Cane Harvester Company.—Talmage Corn & Cane Harvester Co. has been incorporated, with capital of \$10,000, by L. E. Talmage, J. E. Settle, W. F. Ridge, Clinton Steel of Yukon, S. T. Postlewaite of El Reno, O. T., and others.

Lawton—Gold, Silver and Copper Mines.—Queen Bee Mining & Milling Co., reported recently as incorporated with capital stock of \$3,000,000 by W. C. Moore and others, has 200 acres of gold, silver and copper lands which it will develop at once.

Lawton—Mercantile.—Chartered: J. C. Bardwell & Co., with capital of \$2000, by J. C. Bardwell and others.

Meers—Mining.—Chartered: Vanderbilt Mining Co., with \$1,000,000 capital, by L. S. and A. S. Walter, W. L. Crush and J. E. Trogdon of Kansas City, Mo.; J. W. Wardwell of Springfield, Mo., and A. J. Kirk of Meers.

Oklahoma City—Hardware Company.—Alton-Dawson Hardware Co. has been incorporated, with capital of \$150,000, by S. T. Alton, K. W. Dawson, S. L. Maxwell, C. J. Tuohy and Frank Wells.

Oklahoma City—Fruit Company.—Alton-Dawson Fruit Co. has been incorporated, with capital of \$50,000, by S. T. Alton, K. W. Dawson, John Wood and others.

Perry—Sewers.—City council has passed ordinance providing for construction of lateral sewer in sewer district No. 1. Address The Mayor.

#### BURNED.

Greenup, Ky.—The saw-mills of Marshall Logan & Sons and James Boggs.

Guntersville, Ala.—Mr. Massey's saw-mill at Long Hollow.

Hot Springs, Ark.—Valley Planing Co.'s mill; loss reported as \$25,000.

Kinston, N. C.—Carolina Warehouse Co.'s warehouse and prizery; estimated loss \$6000.

Lexington, Ky.—Bluegrass Stove and Iron Works; estimated loss \$40,000.

Pleasant Ridge, Ky.—Flour mill, corn mill and saw mill of Westerfield Bros.; loss \$6000.

Sheldon, S. C.—Cotton gin of Attaway & Black.

Troy, Tenn.—W. H. Nichols' saw-mill.

Tuscaloosa, Ala.—Round-bale plant of American Cotton Co.; estimated loss \$11,000.

#### BUILDING NOTES.

\*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

Arlington, Texas—School.—J. I. Carter, secretary school board, will receive bids until September 14 for erection and completion of eight-room brick school building. Certified check for \$500 must accompany each bid. Plans are on file at office of E. H. Sliven,

architect, 226 Main street, Dallas, Texas, and at Citizens' National Bank, Arlington.

Augusta, Ga.—Stores and Flats.—I. S. Borell will erect the building for which McMurphy & Story were reported last week as preparing plans; structure to be 75x81 feet in size, equipped for stores and flats.

Austin, Texas—Depot.—Charles H. Page, Jr., has prepared plans and specifications for construction of a number of passenger depots to be built at various towns by the Trinity & Brazos Valley Railroad Co.

Baltimore, Md.—Apartment-house.—John S. Cassell has made plans for remodeling the three-story dwelling 303 North avenue into an apartment-house.

Baltimore, Md.—Cottage.—W. V. P. Montgomery is erecting two-story cottage at cost of \$6000 after plans by W. O. Starklin.

Baltimore, Md.—Business Building.—John T. Buckley has been awarded contract for making improvements to building 302 West Baltimore street for Little Joe Wiesenfeld after plans by George C. Haskell.

Belton, Texas—School.—T. L. Means, secretary board of school trustees, will receive bids until September 25 for erection of two-story brick and stone high-school building. Plans and specifications can be seen at office of architects, Smith & Moore, Fort Worth; office of Stuart Moore, Dallas, and office of T. L. Means. Each bid must be accompanied by certified check for \$200. Bond required and usual rights reserved.

Brookhaven, Miss.—Bank Building.—Merchants and Planters' Bank will erect a bank building. F. F. Becker is president.

Cambridge, Md.—Business Block.—W. Lee Dixon will erect brick and stone business block.

Charlotte, N. C.—Depot.—Southern Railway will expend \$15,000 in improving and remodeling depot at Charlotte; C. H. Ackert, general manager, Washington, D. C.

Cokeysville, Md.—Bank Building.—J. S. Fowle has contract for erecting the new national bank building at Cokeysville previously mentioned; cost \$17,000.

Columbia, S. C.—Business Block.—J. L. Minnaugh will erect new business block to replace structure recently burned.

Danville, Va.—Warehouse.—American Tobacco Co. will erect storage warehouse 100x400 feet, one story.

Decatur, Ala.—Business Building.—The business building for which Cowell & Love of Huntsville, Ala., were reported last week as preparing plans will cost about \$10,000. Mrs. E. Lyons will be the owner.

Dublin, Ga.—Bank Building.—Citizens' Bank of Dublin (lately organized) is having plans made by E. J. Fuller for erection of two-story stone-front bank building.

Excelsior Springs, Mo.—Hotel, etc.—Excelsior Springs Electric Railway Co. contemplates building a hotel, constructing a bridge across the Missouri river and making other improvements in connection with its proposed railway. Lester S. Parker of Jefferson City, Mo., is president.

Fort Worth, Texas—Car Barn.—Northern Texas Traction Co. will erect car barn 150x320 feet, to cost \$35,000.

Hamilton, Md.—Church.—George Sack of Lauraville, Md., has contract for erecting new Grace Evangelical Lutheran Church at Hamilton; will be of frame and stone, and cost \$7000.

Hattiesburg, Miss.—Depot.—Gulf & Ship Island Railroad Co., R. Morgan, general superintendent, Gulfport, Miss., will erect new depot at Hattiesburg, as lately reported, but plans are not as yet matured.

Italy, Texas—Hotel and Business Building.—Perry & Casler of Dallas, Texas, have secured contract at \$24,900 for erection of the J. V. Clark Hotel, 100x100 feet, and J. E. Lloyd's 50x100-foot brick building at Italy.

Kansas City, Mo.—Theater.—Forest Park Amusement Co., Max Orthwein and Colonel Hopkins of St. Louis, Mo., stockholders, will erect large theater in Kansas City.

Knoxville, Tenn.—Warehouse.—H. O. Nelson is erecting two-story warehouse 62x120 feet.

Knoxville, Tenn.—Asylum.—Proposals will be opened September 19 for the erection of addition to the East Tennessee Hospital for the Insane. Plans and specifications can be seen at office of Leon Beaver, architect.

Laurel, Miss.—Bank Building.—J. P. Krouse of Meridian, Miss., is preparing plans and specifications in detail for the First National Bank's proposed office building.

Laurel, Miss.—Residence.—P. J. Krouse, Meridian, Miss., is preparing plans for two-story frame residence for Dr. S. W. Lindsey, to cost \$4000.

Laurel, Miss.—Bank Building.—P. J. Krouse of Meridian, Miss., is preparing plans

for bank building for First National Bank of Laurel, to be one story, 38x80 feet, brick, trimmed with stone and terra-cotta, heated by steam, to have vault doors, bank fixtures and furniture, tile floors, marble wainscoting, and to cost \$30,000.

Lebanon, Va.—Residence, Office and Store Building.—W. E. Bures is erecting three-story stone and brick residence, also office and store building.

Lebanon, Va.—Store, Office and Hotel Building.—L. L. Bays & Sons are constructing four-story store, office and hotel building.

Linden, Ala.—Hotel.—D. C. Coats will build hotel of twenty-one rooms to cost \$500. Thomas Puls is architect in charge.

Macon, Ga.—Church.—Plans have been completed and contracts awarded for erection of the \$20,000 centenary Methodist Church, previously reported; will be 115 feet long, of brick. Address Rev. Harry Bardwell.

Mobile, Ala.—Business Building.—G. Van Antwerp & Sons have awarded contract to Jett Bros. for erection of five-story brick business building.

Monroe, La.—Market-house.—Architect Weathers of Memphis, Tenn., has completed plans for new market-house at Monroe; building will be of steel, pressed brick and stone, 156x128 feet, and cost \$20,000.

Nashville, Tenn.—Store Building.—Timothy Dry Goods Co. will rebuild store building to replace one recently burned.

New Orleans, La.—School.—New two-story brick schoolhouse with seating capacity of 1000 pupils will be built for St. Joseph's parish; Rev. Father T. J. Weldon, C. M., pastor.

New Orleans, La.—Building.—Bids will be received until September 23 for erection and completion of four-story brick building for National Enameling & Stamping Co., according to plans and specifications, which can be had at office of Favrot & Livandais, architects, 829 Gravier street, New Orleans, La. Each bid must be accompanied by certified check for \$1500. Bond required and usual rights reserved.

New Orleans, La.—Officers' Quarters.—Mordcaid T. Endicott, chief of bureau of yards and docks, Navy Department, Washington, D. C., will receive sealed proposals until September 26 for constructing three frame dwellings at naval station, New Orleans, La. Funds available, \$22,800. Plans and specifications can be seen at the bureau or will be furnished by the commandant of the naval station upon deposit of \$10.

Norfolk, Va.—Bank Building.—Commercial Realty Co. (to be chartered by directors of National Bank of Commerce) will erect a 12-story bank building with all modern improvements as a bank and general office building.

Oklahoma City, O. T.—Temple.—Contracts have been awarded for erection of the proposed Shriners' temple. Plans, which were prepared by Condy & Webster, call for five-story fireproof structure of steel, cut stone and pressed brick; cost \$60,000.

Port Arthur, Texas.—City Hall.—City will vote on issue of \$35,000 of bonds for erection of city hall. Address The Mayor.

Portsmouth, Va.—Apartment-house.—R. R. Robertson, Chas. T. Parrish, F. S. Hope, J. Davis Reed and K. R. Bala are having plans made for erection of seven-story apartment-house to have all modern improvements, including electric lights, steam heat, elevators, etc.

Raleigh, N. C.—State Capitol.—Frank P. Milburn of Columbia, S. C., previously reported to prepare plans and specifications for alterations and additions to State Capitol to cost \$300,000, has completed same.

Russellville, Ky.—Courthouse.—Contract has been awarded E. W. Furey of Newport News, Va., at \$33,000 for completion of Logan county's new courthouse.

Selma, Ala.—Elks' Building.—W. R. Peacock states that contract has practically been let for the erection of the proposed Elks' building.

St. Louis, Mo.—Parish House.—William H. Gruen, architect, 617 Chemical Building, has awarded contracts for parish house for Church of Redeemer, to be two stories, of brick, with sandstone trimmings, 40x73 feet, to have electric lights, sanitary plumbing, heated by steam, etc.; cost \$12,000.

St. Louis, Mo.—Apartment-house.—Chas. K. Rumsey, architect, has completed plans for two buildings, hotel and apartment-house, to cost \$350,000. Contracts will be awarded at once for erection of same; will be four stories, 60x125 feet.

St. Louis, Mo.—Fair Building.—Texas World's Fair Commission has awarded contract to Joiner T. Taylor of Houston, Texas,

at \$45,562 for erection of the Texas building at St. Louis exposition.

Thomas, W. Va.—Store Building.—M. Bulle has let contract to the Home Building Co. of Keyser, W. Va., for construction of three-story store and dwelling-house.

Vicksburg, Miss.—Hall.—Knights of Pythias contemplate building a \$20,000 hall.

Washington, D. C.—Apartment-house.—John T. Wilson, 913 E. Main street, Richmond, Va., has contract to build Roosevelt apartment-house at Twentieth and P streets; building to be eight stories high, fireproof throughout, contain 125 living rooms, lower floor to be a large department store, and to cost \$175,000.

Washington, D. C.—Hotel.—Architects P. T. Marye and Fred A. Wright have sent out plans for the proposed new Hotel Potomac; building will be twelve stories, of fireproof construction, and cost \$1,000,000.

## RAILROAD CONSTRUCTION.

### Railways.

Adrian, Ga.—The Wadley & Mt. Vernon Railroad will, it is reported, soon lay track on its extension from Broxton to Barrows Bluff, on the Ocmulgee river, eleven miles.

Anniston, Ala.—The Eastern Alabama Railway from Talladega to Pyriton has been completed and put in operation. It is in the L. & N. system.

Atlanta, Ga.—The Atlanta & Marietta Electric Railway Co. has applied to the county board for a franchise to build its line. It will be about twenty-five miles long.

Baltimore, Md.—The Baltimore & Ohio Railroad Co. will, it is reported, lay additional tracks in the yards at Parkersburg, W. Va. J. M. Graham is chief engineer at Baltimore.

Burnsville, Tenn.—Reported that the Estato Electric Co. will build a railway from Burnsville to Boonford, seven miles.

Chattanooga, Tenn.—The Central of Georgia Railway has completed its branch to Cloud Springs. It leaves the main line at Mission Ridge.

Cheraw, S. C.—The Chesterfield & Lancaster Railroad will, it is reported, build a 15-mile extension from Ruby to Plains. The survey is reported under way. W. F. Stevenson is president at Cheraw.

Cincinnati, Ohio.—A mortgage is recorded for a railway from Columbus, Ohio, to Mayville, Ky., with an extension from the latter place, ninety miles through Jackson, Pike, Floyd and Martin counties, Kentucky, to form an outlet for the coal fields on the west side of Big Sandy river. The Great Northern Coal & Coke Co. is said to be promoting the line. That company includes J. N. Camden and Sprigg Camden of Parkersburg, W. Va.; P. I. Kimberly of Sharon, Pa.; F. A. Dinley and Robert Nomon of Chicago; Geo. C. Howe of Duluth; J. C. Mays of Paintsville, Ky., and members of an Eastern syndicate.

Columbus, Miss.—The Columbus, Memphis & Pensacola Railroad Co. has been organized by electing officers as follows: Newman Cayce, president; E. C. Chapman, vice-president; Warren M. Cox, secretary; John A. Stinson, treasurer; W. B. Walker, general counsel; directors, Newman Cayce, Walter Weaver, P. W. Maer, Warren Cox, E. C. Chapman, John A. Stinson, J. W. Buchanan and W. B. Walker; executive committee, Newman Cayce, Walter Weaver and P. W. Maer.

Dallas, Texas.—The Rusk & Southwestern Railway Co. has been chartered to operate and extend the State Railroad in Cherokee county. The incorporators are W. H. Knox, H. Knox, C. W. Hawley, Robert Angel and W. F. Robertson of Dallas, J. B. Reagan, E. L. Gregg, Robert Pryor, A. F. Kirkpatrick and S. P. Wilson of Rusk.

Elkin, N. C.—Miller Hinchshaw is reported as saying that arrangements have been completed to build a railroad from the Southern Railway two miles above Elkin, via Dimmette and Lomax, to Stone Mountain. Rights of way secured for the line, which is to be built to get timber and stone from the mountains around Traphill.

Elkins, W. Va.—The Coal & Coke Railway Co. is receiving bids for grading on about ten miles of single-track railroad from the mouth of Copen run, near Burnsville, Braxton county, West Virginia, to a point on Perkins fork of Cedar creek. Plans and profile at the office of W. H. Bower, general manager, at Elkins, or at the office of A. A. Chapman, engineer, Weston, W. Va.

El Reno, O. T.—The Middle States Construction Co., J. E. Henderson, president, El Reno, O. T., has the contract for constructing and equipping the St. Louis, El Reno & Western Railway, now under construction from Guthrie southwest through El Reno,

O. T. The grading for sixty miles of road is about 75 per cent. finished, and tracklaying will begin at Guthrie about October 1. Contracts for tracklaying, depots, section-houses, water stations and fencing have not yet been let. H. A. Genung, El Reno, O. T., is chief engineer St. Louis, El Reno & Western Railway Co., and C. C. Nelson, Fort Scott, Kan., is president.

Fort Smith, Ark.—Mr. S. A. Williams, president of the Sebastian Electrical Co., writes the Manufacturers' Record that it proposes to run a trolley line of railway through the coal area of Sebastian county, connecting various towns with Fort Smith. The towns are Jenny Lind, Bonanza, Huntington, Mansfield, Hartford, Mines No. 3 and 4 of American Smokeless Coal Co., Burma, Montclair, Greenwood and Wicherville. Greenwood will be the power point, with substations where needed. The line will be about fifty miles long, and will connect with the St. Louis & San Francisco, the Missouri Pacific, the Choctaw, Oklahoma & Gulf, the Midland Valley, the Arkansas Central and the Kansas City Southern railroads. Rights of way are being secured, but the company is not yet ready for construction bids, though it is hoped to begin building soon.

Fort Worth, Texas.—F. M. Haines, general manager of the Northern Texas Traction Co., is reported as saying that the line from Fort Worth to Dallas will be double-tracked.

Franklin, La.—The Franklin & Abbeville Railroad is reported practically completed from Franklin to Abbeville.

Gainesville, Ga.—Mr. H. D. Jaquish informs the Manufacturers' Record that the proposed Atlanta, Beaufort & Gainesville Electric Railway will be about sixty miles long.

Green Sea, S. C.—It is reported that Derham & Co. will build a railroad from Green Sea, ten miles, to Howard, on the Atlantic Coast Line.

Hayneville, Ala.—Construction of the Hayneville & Morganville Railway, eight and one-half miles long, has begun. The officers are: Col. Willis Brewer, president; Dr. W. P. Russell, treasurer; W. P. McGough, secretary and attorney; F. M. Milner, construction engineer.

Hazlehurst, Miss.—Rights of way have been secured for the Coen Electric Belt Railway, which is to connect Hazlehurst, Gallatin, Brown's Wells, Bowerton, Barlow, Mizpah, Willing and other points in Copiah county. M. V. Sickle of Michigan and Henry Russell of Minnesota are reported interested.

Hazlehurst, Miss.—Russell & Seeckle, promoters of the electric interurban belt line, have been granted rights of way by the city council.

Hendersonville, N. C.—Reported that W. A. Smith, attorney-at-law, has received from Charles B. Thompson, Hotel Marlborough, New York city, a proposition to build an electric railway to connect Hendersonville, Asheville & Rutherfordton, on condition that Henderson county issues \$100,000 of bonds.

Hillsboro, Texas.—The Missouri, Kansas & Texas Railway is reported to have let the contract to lay thirteen new tracks with 1000 cars capacity in the south yard.

Jennings, La.—The Jennings & Northeastern Railroad Co. has been granted a franchise through the city. The Commercial League has appointed a committee to close a deal for building the road.

Jonesboro, Ark.—E. H. Mathes is reported as saying that men are at work clearing right of way for the Jonesboro, Newport & Western Railroad, which will be forty miles long from Jonesboro to Newport. The line is to be completed within eighteen months. E. L. Westbrook is general manager.

Kansas City, Mo.—The Excelsior Springs & Missouri City Railroad Co. has been chartered to build an electric line ten miles long to connect the two towns. The incorporators are Lester S. Parker, Maurice A. Wogan, Sidney P. Allen, W. E. Winner, John W. Creech, Charles S. Curry and Elmore S. Truitt. The line may also be built from Missouri City to Kansas City, twenty-one miles. Mr. Creech, one of the incorporators, is a member of the firm of Creech & Lee, railroad contractors at Kansas City. L. S. Parker is president, and John W. Creech, vice-president and general manager. An extension may be built to Richmond and Liberty.

Lawrenceville, Ga.—The Lawrenceville Branch Railroad will, it is reported, lay new ties and rails. It is ten miles long. J. R. McKelvey is lessee and manager.

Lenoir, N. C.—The Carolina & Northwestern Railroad is reported to have 300 men employed twenty miles beyond Lenoir in grading for the proposed extension over the mountain.

Little Rock, Ark.—The Marion County Railway Co., capital \$250,000, has been chartered to build a line connecting with the White branch of the Missouri Pacific on the north bank of White river, opposite the mouth of the Buffalo river. It will be twenty-five miles long. The incorporators are J. C. South, Z. H. Horton, Thomas Combs, F. J. McLean, George E. Dodge and J. E. Williams of Little Rock, J. S. Pyatt and E. G. Merriam of St. Louis. It is a Gould line.

Little Rock, Ark.—The Varner Construction Co. has been organized to build the Varner, Cummings & Eastern Railroad. William Lange is president; A. L. Dalhoff, vice-president; L. E. Boyd, secretary, and Ben Franklin, treasurer.

Louisville, Ky.—The Louisville & Eastern Electric Railway will, it is reported, soon begin work on its proposed extension from Lakeland to Shelbyville, and also on the L. E. extension from Beard's Station. The final survey has been accepted.

Louisville, Ky.—It is reported that in consequence of a deal to combine the Kentucky and Indiana Bridge & Railroad Co. and the Louisville & Southern Indiana Traction Co., \$250,000 will be spent for constructing new track to make a double-track line connecting Louisville with Jeffersonville and New Albany, Ind.

Madisonville, Texas.—The International & Great Northern Railroad has completed its extension to Madisonville.

Memphis, Tenn.—Grading has been completed on the Memphis Belt Line from Gayoso bayou north and east for two miles to Billings Park. The Southern Construction Co. has this contract. Roach & Monigan have the grading contract from Billings Park to McGhee Station; have 200 teams on the work.

Nacogdoches, Texas.—The Citizens' Guarantee Committee has, it is reported, closed a deal with E. B. Hayward and associates of Davenport, Iowa, for seventeen miles of railroad along the old roadbed of the Red River, Shreveport & Western line.

Nashville, Tenn.—The Tennessee Central Railroad is reported to be extending the Crawford branch fifteen miles north of Monterey into timber and mineral country. W. N. McDonald is chief engineer.

Norton, Va.—The Cumberland Transportation, Light & Power Co., recently incorporated to build an electric railway in Wise county, has decided to make an extension to Clintwood, Dickenson county, from Tom's Creek. Other towns to be connected are Big Stone Gap, Stonegap, Appalachia, Dorchester, Norton, Wise, Glamorgan and Coeburn.

Oklahoma City, O. T.—The Missouri, Kansas & Texas Railway has begun operating its new line from Oklahoma City to Agra, O. T., fifty-five miles. The line is to be completed to Bartlesville, I. T., by October 1.

Oklahoma City, O. T.—The Great Eastern & Western Railway Co., capital \$10,000,000, has been chartered to build a line from Madge, Greer county, via Lawton and the Chickasaw Nation to Huntington, Ark., 232 miles. The incorporators are Seymour C. Heyman, J. M. Owen, E. E. Brown, W. M. Harrell and J. B. Harrell, all of Oklahoma City.

Philadelphia, Pa.—Chief Engineer W. H. Brown of the Pennsylvania Railroad has opened bids for the new terminal at Washington, more than 100 being received. The award is not to be made for a week or ten days.

Port Lavaca, Texas.—Ross L. Clark, president of the Coast Belt Railway, is quoted as saying that construction will begin within a month. The line will connect Sinton, Galveston and Houston, and will be 250 miles long.

Portsmouth, Va.—The Seaboard Air Line will, it is reported, build a direct entrance into Atlanta. J. M. Barr is general manager.

San Francisco, Cal.—Mr. J. Kruttschnitt, fourth vice-president and general manager of the Southern Pacific Company, writes the Manufacturers' Record that nothing definite has been decided upon at present regarding the extension of the Gulf, Western Texas & Pacific Railway in Refugio county, Texas.

San Francisco, Cal.—The Southern Pacific Company will, it is reported, build a line from Durango, Mexico, to a point on its line in Arizona. William Hood is chief engineer.

Santa Fe, New Mexico.—Mr. Allan G. Kennedy, chief engineer Santa Fe Railway Co., writes the Manufacturers' Record confirming the report that the company will build a line from Torrance, New Mexico, to Big Springs, Texas, and saying that surveying parties for the work are just starting into the field. Such a line would be about 300 miles long.

Shreveport, La.—The Louisiana Railway & Navigation Co., formerly the Shreveport



& Red River Valley Railway, has been granted entrance to New Orleans by action of the city council. Should the New Orleans Terminal Co. (Frisco system) not build its Belt Line within a year, the Louisiana Railway & Navigation Co. may construct it. W. E. Hawley is chief engineer at Shreveport.

St. Augustine, Fla.—The Florida East Coast Railway has purchased rights of way to straighten its line from the union depot along the San Sebastian river. Mr. J. R. Parrott is vice-president and general manager at St. Augustine.

St. Louis, Mo.—W. S. Brawner and Charles Cundiff of St. Louis are reported to be promoting a belt line, for which a survey has been made, connecting Joplin, Scotland, Nesho, Granby, Pelee City, Sarcosie, Carthage, Webb City and Cartersville in the remaining district of Missouri. Rights of way are being secured.

Taylorsville, N. C.—Committees have been appointed to work for a charter for the proposed Taylorsville, Wilkesboro & Newton Railroad, which may be either steam or electric. Among those interested are W. C. Flinn, stay of Newton, Milton McNeil, F. B. Henderson and others of Wilkes.

Williamsport, Pa.—The Northern Central Railway will, it is reported, issue \$4,000,000 of new stock to pay for present and projected improvements, including a detour line around Baltimore, Md. J. H. Nichol is principal assistant engineer at Williamsport.

Williamson, W. Va.—H. M. Payne, assistant engineer Norfolk & Western Railway, is quoted as saying that double-tracking from Williamson to Hatfield Tunnel will be completed by September 15; also that grading on the line up Buffalo creek to reach coal fields and to connect with the Norfolk & Western at Barger Siding, W. Va., was begun August 17 by Walton & Co. The same firm have also received the contract for another coal branch line to be built from Williamson up Williamson branch to coal fields on the other side of the mountain from the Buffalo Creek line.

#### Street Railways.

Augusta, Ga.—The Aiken & Augusta Electric Railway has applied for a franchise on Broad, McKinney, Jackson and Telfair streets.

Birmingham, Ala.—The Birmingham Railway, Light & Power Co. has been granted a franchise in Bessemer.

Chattanooga, Tenn.—The Chattanooga Electric Railway Co. is reported to have plans for lines to the top of Lookout mountain and to the permanent army post at Cloud Springs.

Fort Worth, Texas.—Col. Robert McCart, representing a company which proposed building a street-car line from Fort Worth to Arlington Heights, is reported as saying that it may be built to Lake Como.

Kansas City, Mo.—The Excelsior Springs Electric Railway Co. has been incorporated to build a line at Excelsior Springs. Those interested are Henry N. Garland, E. S. Jewett, U. C. Ward, Herbert S. Padley and Jas. B. McGowan. Erastus L. Morse of Excelsior Springs is also reported interested.

Muskogee, I. T.—C. N. Haskell of the Muskogee Traction Co. has given \$10,000 bond to begin work on the street railway within thirty days.

Newport News, Va.—Robert I. Mason, receiver of the Hampton Roads Railway Co., is reported as saying that the bondholders have agreed to provide \$300,000 for completing construction of the road and settling claims.

Richmond, Va.—The Virginia Passenger & Power Co. will, it is announced, extend its Seven Pines line ten miles to a point beyond Mechanicsville. Fritz Sitterding is president. Mr. Frank J. Gould is also quoted as saying that an extension may also be built to Ashland, eighteen miles.

Facts Worth Remembering.—A leaflet that will interest owners of business buildings and industrial plants of all kinds has been issued with the title "Facts Worth Remembering." Its contents refer to the services which the American Appraisal Co. offers in connection with fire insurance policies. Aside from the interference with one's business caused by fires, many men are aware of the loss and inconvenience and the difficulties that arise in the equitable settlement of insurance contracts. The American Appraisal Co. aims to simplify matters in this regard, and offers its services in keeping an appraisal fully up to date, so that the insurance may be promptly determined. This is one of the new features of American business life that is finding a ready recognition among discerning people. Send for a copy of this leaflet, addressing the company's New York office at 54 William street; Philadelphia offices are at 610 Crozier Building, and Boston offices at 176 Federal street.

### Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Automatic Sprinklers.—See "Electrical Equipment."

Bag Machinery.—N. Bloch & Co., 37 Nivison street, Norfolk, Va., want machinery for sewing burlap bags.

Bakery Equipment.—Southern Supply Co., Mobile, Ala., wants addresses of parties manufacturing machinery for making crackers, cakes, etc.

Barges.—Wm. B. Ladue, captain, engineers, Mississippi river commission, Fullerton Building, St. Louis, Mo., will receive sealed proposals in triplicate until September 21 for building three-decked material barges. Information furnished on application.

Bed-spring Machinery.—Edwin Nelson, Miami, Fla., will want machinery to make all-steel bed springs.

Boat.—Banning Manufacturing Co., Edenton, N. C., will probably purchase new boat to replace one lately burned.

Boiler.—B. S. Lucas, Roper, N. C., wants 40-horse-power and a 20-horse-power return tubular boiler to stand 100 pounds working pressure; good second-hand.

Boiler and Engine.—See "Mattress Factory."

Boiler and Engine.—Jefferson D. Marks, Crowley, La., will want 150-horse-power engine and 100-horse-power boiler.

Boiler and Pump House.—Robert E. King, secretary board of public works, Kansas City, Mo., will receive sealed bids until September 17 for furnishing all material and labor necessary for erection and completion of fireproof boiler and pump house for Turkey Creek pumping station; size of building 137x176 feet. Scope of contract consists of about 2000 cubic yards of concrete for foundation, 1,075,000 brick, 24,000 square feet reinforced concrete roofing, 5500 square feet metal windows and thirty-three tons of structural steel. Bids will be received on each of the above items separately. Plans, details and specifications can be seen at office of superintendent of water department at the City Hall. Certified check for 5 per cent. of amount of bid must accompany each bid. Usual rights reserved.

Bottling Equipment.—Artesian Bottling Works, Warrenville, S. C., wants to buy second-hand Crown cap table and half-pint Huchingson and Crown cap bottles.

Bridge.—Jefferson City, Mo., will soon ask bids for a steel bridge of 30 or 40-foot span, costing about \$2000. J. C. Herring is city engineer.

Bridge Construction.—Contract for furnishing material and labor and to construct bridge across Chattahoochee river near Vinings will be let at public outcry October 1. Plans and specifications can be seen at office of clerk of the board of commissioners of roads and revenues of Fulton county at Atlanta, Ga., and at office of the ordinary of Cobb county at Marietta. Certified check for \$500 and bond required. Usual rights reserved.

Broom Machinery.—C. O. DuVall, Douglas, Ga., wants to correspond with manufacturers of broom machinery.

Building Materials.—L. L. Bays & Sons, Lebanon, Va., are in market for flooring, metal roofing, windows, doors, etc.

Building Materials.—Nuckolls Coal & Coke Co., Pratt, W. Va., wants lot of building materials. Address T. C. McVey.

Cast-iron Borings.—Clark & Hines, 809 Equitable Building, Baltimore, Md., are in market for cast-iron borings in carload lots f. o. b. Baltimore, Md., with prices on same.

Chair Bottoms.—D. F. Dunlop & Co., Boxwood, Va., want to purchase chair bottoms of cane and wood.

Conduit and Electric-wiring System.—James Knox Taylor, supervising architect, Treasury Department, Washington, D. C., will receive sealed proposals until October 7 for installation of conduit and electric

wiring system for United States custom-house and postoffice at Newport News, Va., in accordance with plans and specifications, copies of which may be obtained at supervising architect's office or at office of superintendent of construction at Newport News.

Conveying System.—Rockingham Milling Co., McGaheysville, Va., wants estimates on construction of tramway 1500 feet long from mill to railway, crossing stream 150 feet wide and conveying about 2000 pounds at each trip; elevation to be slightly higher at mill, and highest elevation above ground to be about thirty feet.

Cotton Machinery.—W. T. Owen, 1115 Noble street, Anniston, Ala., wants addresses of manufacturers of machinery for making cotton towels.

Dry-kiln.—See "Mill Supplies."

Electrical Equipment.—Weems-Lockwood Furniture Co., Greenwood, Miss., wants dynamo and electrical equipment for 150 lights, steam-heating apparatus, automatic sprinklers, hardware and tools.

Elevator.—James Knox Taylor, supervising architect, Treasury Department, Washington, D. C., will receive sealed bids until September 21 for installation of an electric elevator in the United States postoffice and custom-house, Charleston, S. C., in accordance with drawings and specifications, copies of which may be obtained at office of supervising architect.

Engine.—E. A. Howes, Atkinson, N. C., wants new or second-hand 100-horse-power engine.

Engine.—Spray Woolen Mills, Spray, N. C., will buy new Corliss engine of 125 horse-power.

Engines.—See "Hoisting Equipment."

Fence and Gates.—Board of supervisors Russell county have completed stone wall of 200 feet or more around courthouse, and are in market for ornamental metal fence and gates for same. Address L. L. Bays, clerk county court, Lebanon, Va.

Fire-department Equipment.—Town of Timmonsville, S. C., wants to buy fire hook-and-ladder outfit, and desires correspondence with manufacturers. Address A. J. Broom, secretary and treasurer.

Fire Extinguishers.—Proposals will be received at bureau of supplies and accounts, Navy Department, Washington, D. C., until October 27 for furnishing fire extinguishers at several navy yards. Blank proposals will be furnished on application to the navy pay offices Portsmouth, N. H.; Boston, Mass.; New York, N. Y.; Philadelphia, Pa.; Washington, D. C., and Norfolk, Va.; H. T. B. Harris, paymaster-general, U. S. N.

Flooring.—Rhode Island Company, Spray, N. C., is in market for 18,000 feet of maple flooring, factory grade.

Flour Mill.—Kentucky Milling Co., Henderson, Ky., is in market for bids on mill supplies and other materials for flour mill.

Flour Mill.—Holland & O'Neal, Cockeysville, Md., will want machinery for flour mill of seventy-five barrels capacity.

Gas-well Fixtures.—See "Oil-well Supplies."

Hardware.—D. C. Brown & Bros., Anderson, S. C., wants to purchase a bill of hardware.

Hardware.—See "Electrical Equipment."

Heating and Ventilating Apparatus.—Henry B. F. Macfarland, Henry L. West and John Biddle, commissioners, Washington, D. C., will receive sealed proposals until September 19 for furnishing and installing mechanical heating and ventilating apparatus in the rear wing of workhouse for males, Washington Asylum grounds. Specifications and drawings sufficient to give the commissioners and consulting engineer a clear understanding of system proposed to be used must accompany the proposal. Forms of proposals may be obtained in the office of the inspector of buildings, and bids must be made on such official form.

Heating Apparatus.—See "Electrical Equipment."

Heating Apparatus.—East Mississippi Insane Hospital will install new heating plant. Address Dr. J. M. Buchanan, Meridian, Miss.

Heating Plants.—C. P. Townsley, quartermaster, Fort Monroe, Va., will receive sealed proposals in triplicate until October 8 for installing hot-water heating plants in thirty-three buildings at Fort Monroe. Information furnished on application. Usual rights reserved.

Heating System.—White Furniture Co., Mebane, N. C., wants heating system for furniture factory and finishing rooms.

Hoisting Equipment.—Edward McDowell, 147 Ivy street, Atlanta, Ga., is in market for double-cylinder double-drum 13-horse-power hoister.

Hoisting Equipment.—Anthracite Machinery & Supply Co., Allentown, Pa., wants lot of hoisting rope and cables three-eighths to three inches in diameter, new or second-hand; fifteen, twenty and twenty-five horse-power gasoline engines, second-hand; dynamos, motors, wooden or iron tanks, 600 to 5000 gallons capacity; twelve horizontal slide-valve engines, ten to sixty horse-power; five hoisting engines, friction drums, pumps, ralls, pipe, etc.

Hoop-making Machinery.—W. R. Craig, Columbia, Tenn., desires printed matter and prices on hoop-making machinery.

Laundry.—E. L. Hollis, No. 14 Planter's Bank, Americus, Ga., wants to correspond with parties having steam laundry for sale.

Laundry Machinery.—J. P. Banister, Catechee, S. C., wants addresses of manufacturers of laundry machinery.

Lumbering Equipment.—Central Manufacturing Co., Roanoke, Va., is in market for second-hand traction engine from ten to fifteen horse-power.

Mattress Factory.—J. H. Marshall, Inez, N. C., wants equipments for mattress factory, including 12 or 15-horse-power engine and boiler; second-hand in good condition preferred.

Mill Supplies.—See "Flour Mill."

Mill Supplies.—Watts Bros. Manufacturing Co., Talladega, Ala., wants prices on felt roofing, sheathing paper, dry-kilns, shavings conveyor, veneering, etc.

Mining Equipment.—Queen Bee Mining & Milling Co., Lawton, O. T., will want complete equipment for mining gold, silver and copper. Address W. C. Moore of the company.

Mining Equipment.—Clarksville Anthracite Coal Co., Clarksville, Ark., is in market for complete hard coal mining equipment, including boilers, engines, scales, breakers, screens, conveyors, mine cars, cages, etc.

Oil-well Supplies.—T. H. Miller, secretary Thomas Oil & Gas Co., Blacksburg, W. Va., will want prices on oil-well supplies and gas fixtures.

Quarrying Equipment.—Balfour Quarry Co., Asheville, N. C., wants full information and quotations on machinery for grinding and bolting talc. Complete plant will be wanted to handle from 1000 to 2000 pounds per hour.

Paving.—Wm. Yerger, city clerk, Greenville, Miss., will receive bids until October 6 for furnishing material and labor necessary to construct approximately 30,000 square yards of brick pavement, concrete foundation, and 10,000 lineal feet stone curbing. Each bid must be accompanied by certified check for \$500. Plans and specifications are on file with city engineer. Contractors are invited to submit their own plans and specifications with sealed bid for same. Usual rights reserved.

Paving.—See "Sewers."

Planing Mill.—Strickland Bros., Cartersville, Ga., will want complete planing-mill equipment, and desire correspondence at once.

Plumbing and Wiring.—Philip Yost, quartermaster, Fort Caswell, N. C., will receive sealed proposals in triplicate until October 19 for constructing plumbing, heating and wiring guardhouse, hospital and one officers' quarters; constructing, plumbing and wiring quartermaster workshop and three sets N. C. S. quarters at above post. Information furnished on application. Usual rights reserved.

Pulleys.—Baker, Stillwell & Hart, 421 Chalfoux Building, Birmingham, Ala., are in the market for four cast-iron pulleys 40-inch diameter, 10-inch face, 2 15-16-inch bore.

Pump.—John W. Hays, C. E., 3 South Adams street, Petersburg, Va., is in need of a steam pump of not less than 100 gallons capacity per minute.

Railway Construction.—Sealed proposals will be received at office of W. H. Bower, general manager Coal & Coke Railway Co., Elkins, W. Va., for the graduation and masonry, classified and unclassified, on about ten miles of single-track railroad from mouth of Copen run, near Burnsville, Braxton county, West Virginia, to a point on Perkins fork of Cedar creek, including one 1100-foot tunnel. Plans and profile can be seen at general office, Elkins, or at office of A. A. Chapman, engineer, Weston, W. Va. Usual rights reserved.

Railway Equipment.—Alabama Consolidated Coal & Iron Co., T. G. Bush, president, Birmingham, Ala., is in market for saddle-tank dinky engine, standard gauge, for beehive coke ovens; carry weights ten to twelve tons; drivers about thirty inches, with metallic cab.

Railway Equipment.—See "Hoisting Equipment."



**Railway Equipment.**—Nuckolls Coal & Coke Co., Pratt, W. Va., wants lot of steel rails. Address T. C. McVey.

**Railway Equipment.**—Stringfellow & Webster, Richmond, Va., are in the market for 75 to 100 tons of Grove girder rails about eight or nine inches deep, either new or re-layers; wants what is known as the Pennsylvania Section 258 or Cambria nine-inch Grove girder.

**Road Machinery.**—Jefferson City, Mo., needs a good second-hand gyratory rock crusher, capacity about 100 yards per day, also a porcupine scarifier or its equivalent for resurfacing macadam roads; J. C. Herring, city engineer. Also see under heading of "Sewers."

**Seawall.**—M. G. Splinks, captain artillery corps, constructing quartermaster, office depot quartermaster, U. S. A., Room 307 Equitable Building, Baltimore, Md., will receive sealed proposals in triplicate until September 29 for furnishing all material and labor required in the construction of a seawall at Fort Howard, Md. Information furnished on application and usual rights reserved.

**Sewer Construction.**—Bids are asked until September 15 for constructing about 10,250 feet of 8 to 12-inch pipe sewer; G. D. Helmick, city engineer; Chas. F. Shepherd, city clerk, Hannibal, Mo.

**Sewers.**—Jefferson City, Mo., will soon ask bids for 8 to 12-inch pipe for sewerage, for macadamizing and for brick or asphalt paving. J. C. Herring is city engineer.

**Sewing Machinery.**—See "Bag Machinery."

**Shear.**—Ollinger & Bruce Dry-Dock Co., Mobile, Ala., is in market for one power bar iron shear to cut one and one-quarter inches round, either new or second-hand.

**Tank.**—Capt. H. J. Slocum, constructing quartermaster, Postoffice Building, Chattanooga, Tenn., will receive proposals in triplicate until September 15 for constructing 200,000-gallon steel tank, etc., at Chickamauga Park, Ga. Information furnished on application. United States reserves usual rights.

**Tank.**—Rhode Island Company, Spray, N. C., is in market for 15,000-gallon steel tank on 50-foot trestle, erected.

**Tanks and Pump.**—See "Hoisting Equipment."

**Traction Engine.**—See "Lumbering Equipment."

**Veneering.**—See "Mill Supplies."

**Woodworking Machinery.**—Thornhill Wagon Co., Lynchburg, Va., wants to buy second-hand four-sided planer that will dress sixteen inches wide and three inches thick.

**Wood-extract Plant.**—F. Price, Newport, Ark., wants addresses of several manufacturers engaged in converting wood into alcohol, acetates, etc., by destructive distillation.

## TRADE LITERATURE.

**Cars, Hoisting Engines, etc.**—Industrial activity finds uses for a large number of hoisting engines, derrick fittings, narrow and standard gauge cars in different types for various industrial purposes, rails and joints, frogs and switches, boilers and tanks, etc. Catalogue No. 119 of the New Jersey Foundry & Machine Co. gives a comprehensive idea of that class of equipment built at the company's extensive works. This new publication will be found to interest all buyers in the field indicated. Address the New York offices at 915 Murray street.

**Nuttall Products.**—These two words naturally remind one of gears. The Nuttall gears, motor pinions, standard trolleys, Union standard and steel cutters and other articles made by the R. D. Nuttall Co. of Pittsburg, Pa., are well known. The company's facilities for the rapid and accurate production of gears are noted among users. It operates more than 100 gear-cutting machines, with a capacity from the smallest to thirty feet in diameter, comprising what is claimed to be the largest gear-cutting plant in the world. The company gives its undivided attention to this important branch of gear cutting. A booklet entitled "Nuttall Products" gives pertinent points to those who may be interested in this line of output.

**Variable Speed Power Transmitters.**—Variable speed countershafts or power transmitters that are compact, durable, practical and applicable to every class of work are in increasing demand with power-users and manufacturers. The occasions for transmitting power where a variation of speed is desired are numerous, and the uses of a practical power transmitter keep pace with them. The White Variable Speed Countershaft or Power Transmitter is easily and quickly adjusted to give any desired speed between the two extremes at which the machine is designed to run. It is illustrated and briefly described in a leaflet being issued

by the manufacturer, the Power & Speed Regulator Manufacturing Co., Ltd., Kalamazoo, Mich. The White transmitter is made in every class, size and style which the trade demands.

**The International Cup Races.**—Every American citizen is interested in the international yacht races, although he may not know the difference between a schooner and a catboat, and he wants to see the cup remain in America as a trophy of his countrymen's skill. The races of 1903 have again resulted victoriously for this country. A history of the causes bringing about the races is very interesting, and a complete story from their inception in 1851 to the present time is now being distributed by Messrs. I. B. Williams & Son of Dover, N. H. This little pamphlet tells the story in a most interesting manner, and is accompanied with illustrations of the America, Reliance and Shamrock III. Copies may be obtained on request to the Messrs. Williams, who are the well-known makers of oak-tanned leather betting, rawhide and tanned lace leather, etc.

**A Brochure for Steam-Users.**—A pound of coal mixed with a liberal proportion of steam engineering knowledge will often go as far as two pounds of coal without it. So says a brochure entitled "A Profitable Combination." This publication is issued upon the assumption that the steam-user into whose hands it might chance to fall is in business for the primary purpose of making money, and to further that aim is fully alive to any proposition having for its object greater economy in the operation of a steam plant. By having an equipment properly installed—all the numerous details being given especial attention by an experienced man—will enable the steam-user to obtain the maximum results for the minimum amount of money. If the power plant is already built, economies can be effected. Edgar C. Wiley, M. E., issues the booklet mentioned. His offices are in the Lynchburg National Bank, Lynchburg, Va.

**Silico Calcareous Sandstone.**—The manufacture of building bricks from quartz sand and lime is one of the new industries that is making rapid progress because of its inherent value. This industry is treated by expert knowledge in a publication of which the author is Ernst Stoffer, engineer, Zurich, Switzerland. "Silico Calcareous Sandstone" is the title. The chemical and technical principles of their manufacture, according to the situation, erection and management of brick works, is given thorough consideration. An extended notice of this publication has previously appeared in this column, and brief mention is here again given in the belief that many will have their attention attracted to it and be desirous of obtaining copies of the work. The Manufacturers' Record acknowledges the receipt of a copy from the Schwarz System Brick Co., 6, 8 and 10 Bridge street, New York. Messrs. Spon & Chamberlain, Importers of scientific books, 12 Cortlandt street, New York, can furnish the publication.

**The Manufacture of Artificial Sandstone.**—During several years past the manufacture of artificial sandstone or sand brick is a subject that has been attracting considerable attention. Because of this, scientific contributions regarding such manufacture find ready acknowledgment from those who are at present or likely to become interested in the young industry. In such an industry there are always many questions which are the occasion of a great deal of uncertainty both in selection of raw material and the machinery for manufacturing it. It was to settle as many of these questions as possible that S. B. Peppel, B. Sc., prepared "Further Contributions to the Manufacture of Artificial Sandstone or Sand Brick," which was read at the Boston meeting of the American Ceramic Society last February. Mr. Peppel was at the time special assistant Ohio geological survey, stationed at Columbus, but has now removed to 431 W. Main street, Louisville, Ky., where he is established as consulting chemist and engineer. His treatise regarding sandstone is a thorough one, and is accompanied by illustrations, diagrams and tables presenting valuable data regarding this important subject. Copies of the treatise can be obtained. The price is fifty cents.

**Water Purification for Cities.**—Water purification by mechanical and chemical treatment with sulphate of iron for domestic and commercial uses is the subject of a publication which presents the reports of Ernest E. Irons, bacteriologist, and James E. Campbell, chemical engineer and manufacturing chemist. To demonstrate the advantage of sulphate of iron in the purification of water, exhaustive tests were made by Messrs. Irons and Campbell. The water system at Quincy,

Ill., was the plant selected at which to make the test, because exacting conditions prevailed there. The most scientific research and experiment was conducted, and nothing was omitted that would contribute to this end. The result is most favorable to the employment of sulphate of iron for the purification of water. The reports are presented in a booklet issued by the American Steel & Wire Co. In inviting attention to the fact that sulphate of iron is one of its products. Requests for the publication are invited, and any further information can be obtained at any of the company's various offices. The Chicago offices are in the Rookery; New York offices at 71 Broadway, Empire Building; Cleveland offices in Western Reserve Building; St. Louis offices at 1335 Papin street, etc.

**Economically Handling Material.**—Conveying by means of belts was first applied more than fifty years ago, and is today in use with the various improvements and devices that modern ingenuity has produced as suggested from time to time by actual experience. Labor-saving machinery for economically handling any type of material in bulk or package is one of the specialties of present-day mechanical engineering, and American builders and erectors of this class of equipment are known for their success all over the world. The John A. Mead Manufacturing Co. of 11 Broadway, New York, is a specialist in conveying equipments, and is now issuing an interesting illustrated pamphlet telling about Ridgway's patent, something new in belt conveyors. The Ridgway Patent Conveying Belt provides for what is known to be the weak spot in such belts, and its construction is such as to give great tensile strength and reduce to a minimum wear and tear of the belt from the continued turning up of the edges. The Ridgway effects this by its flexible edges. The remark has been often made by those who have suffered from the wear and tear on their conveying belts at the bending points, "a perfect conveying belt should have its sides hinged," and this is just what the Mead Company claims to furnish. Inquiries are solicited for the illustrated description of this valuable improvement to belt conveyors.

**Mietz & Weiss Engines.**—These engines were placed upon the market with a view to introducing a safe, simple and reliable prime mover. The Mietz & Weiss engines are built for operation by gas and by kerosene, and have found favor in many important industrial establishments. Although the expectation placed in the gas engine has been fully realized, the field of its application must necessarily be limited to the gas-house area. Because of this was introduced the kerosene engine, which has widened the field of application to the remotest corner of the globe. In catalogue A30, now being distributed, are presented reproductions of photographs of Mietz & Weiss gas and kerosene engines, and their application to various branches where they have been in constant operation for years with remarkable economy and durability. The working method of these engines is the same for either fuel, their construction differing only in the mechanism for injecting the fuel into the cylinder. Each engine receives at full power an impulse at each turn of the crankshaft, i. e., the air and fuel injection, the compression and burning of the mixture and the expulsion of the exhaust are all performed at a single turn in a most direct and simple manner. A full description of these successful engines can be seen by a perusal of the catalogue. August Mietz, 126-133 Mott street, New York, builds the engines.

**Marine Refrigerating Machinery.**—Machinery for marine use must be beyond the possibility of disabling accidents in so far, of course, as is possible by human accomplishment. At the same time probably no class of machinery is regularly placed in more experienced hands. These and all practicable conditions were constantly in mind with the Brown-Cochran Company in perfecting the details of its carbonic anhydride refrigerating machinery, with the result of complete success in many installations. Vessels thus equipped are giving the best possible results to owners and users in many waters, and that the carbonic anhydride system is entirely practicable under tropical conditions is seen in the fact that steamships fitted with it are carrying meat from Australia and South America across the equator to Europe. The system in reference is compact, light, simple, durable and strong, economical of power, and safe. A complete description of the marine refrigerating machinery of this type, designed and built at the Brown-Cochran works, is given in an illustrated pamphlet now being distributed, and which is mailed on request to individuals, firms or companies who think of in-

stalling plants for steamships, yachts or other vessels. The Brown-Cochran Company of Lorain, Ohio, issues the publication in the interest of its design and construction of carbonic anhydride equipments. It is prepared with experience and facilities to undertake any sort of machinery installation on shipboard, and will guarantee the perfection of its work and the satisfactory performance of the equipment's duties. New York offices at 26 Cortlandt street.

**The Latest Street Sweeper.**—Municipalities aim to promote cleanliness and health in every possible way. Probably the most familiar feature of such efforts is the cleaning of the streets. This operation is frequently before our eyes being done either by men with brooms or by machine broom street sweepers. Now the latter equipment has been greatly improved, and a machine to take its place entirely is being introduced. This latest street sweeper is known as the Cyclone Street Sweeper. It is horseless, broomless and dustless. No labor is required to pick up the dirt after it goes over the ground, and no water required to sprinkle the street in advance. This apparatus will effectively clean the street, and at the same operation will sweep, pick up and deliver the dirt into a suitable receptacle which it carries, and without in any manner distributing particles of dirt into the surrounding atmosphere. The machine will remove and pick up fine dust that a broom cannot gather. The sweeping, picking up and depositing are accomplished by a series of blasts. A complete description of the mechanism is presented in the prospectus of the company which will build and sell the machines. This is the Cyclone Street Sweeper Co., recently chartered with a capital stock of \$500,000, and having offices at Room 34, Manufacturers' Record Building, Baltimore, Md. Frederick W. Farquhar of Warren, Chatman & Farquhar, New York, is president; Wm. G. Menchine, secretary of the Infusorial Earth Manufacturing Co., Baltimore, is secretary, and Arthur O. Babendrelor of the Baltimore city water department is treasurer, and Paul Iglehart, Baltimore's well-known commissioner of street cleaning, is one of the directors.

**Something About Mattresses.**—It is astonishing to note how slow inventors have been in improving sleeping arrangements, especially the beds themselves. Old-time bedsteads were elaborate affairs, frequently very expensive, but poor sleep producers, as the occupant had but little beyond hard wood to lay his weary body upon. (No wonder Hamlet was so melancholy or Richard the Third so bloodthirsty.) It was not so many years ago that the idea was conceived of using goose feathers, and ere long the feather bed was considered the full measure of luxury; then came the hair mattress, and this has been the best bed, although very expensive. This latter fact has been largely responsible for the production of other kinds of mattresses, one of which, the Hygienic Patent Perfection Mattress, has displaced both feathers and hair in thousands of homes, both in this country and in other countries. Over 75,000 have been sold. The Perfection is made of a high grade of clean lint cotton that is thoroughly cleansed, reworked and made into one bat of proper length and width, the depth of which is about five feet. An even pressure is put on the bat, and it is brought down to a proper thickness. By the manufacturer's patented process the fiber of the cotton is not broken, but put in the mattress in such a way as to give the best effects of the resiliency of the staple. The mattress is not laced or laced, but has a perfectly smooth surface, thereby making it absolutely dirt and vermin proof. It never requires remaking, and will improve with age, while an occasional sun bath has the same effect upon it as does reworking hair. The Perfection Mattress Co. at Birmingham, Ala., introduced and manufactures the mattress in question. This company has factories also at Baltimore, Md., and St. Louis, Mo., established because of the largely-increased trade developing in those sections. A leaflet giving full details regarding the mattress is ready for inquirers.

**Frick's Twentieth Anniversary Greeting.**—In the last previous issue of its catalogue the Frick Company presented a few facts which it thought would interest owners of refrigerating machinery. The remarks must have been appreciated, for the company this year celebrates its twentieth anniversary at the close of the most successful year's business it has ever enjoyed. Encouraged by past experience, the constant effort is to increase the efficiency of Frick machinery and methods, and facilities have been improved and extensive enlargements made, both in shops and office. By instituting such decided bot-

(Continued on Page 152.)



## NINTH ANNUAL REPORT.

Macon, Ga., August 28, 1903.

To the Stockholders of the Georgia Southern &amp; Florida Railway Company:

The President and Board of Directors submit the following report of the operations of the Company for the year ended June 30, 1903:

## EARNINGS AND EXPENSES.

Earnings:	1903.	1902.	Increase.	Decrease.
From Freight.....	\$355,839 92	\$762,839 85	\$183,000 07	
From Passenger.....	434,918 15	367,901 49	67,016 66	
From Mail.....	51,235 60	46,633 18	4,602 44	
From Express.....	78,518 92	34,700 57	43,818 35	
From Miscellaneous.....	114,678 45	38,800 89	75,877 56	
	\$1,635,191 04	\$1,250,875 96	\$384,315 08	
Expenses:	1903.	1902.	Increase.	Decrease.
For Conducting Transportation.....	\$505,037 54	\$359,785 25	\$145,252 29	
For Maintenance of Way and Structures.....	271,160 69	182,610 23	88,550 46	
For Maintenance of Equipment.....	329,069 29	302,397 76	26,671 53	
For General Expenses and Taxes.....	129,134 54	111,112 85	18,021 69	
	\$1,234,402 06	\$955,906 09	\$278,495 97	
Net Earnings from Operation.....	\$400,788 98	\$294,969 87	\$105,819 11	
Ratio of Expenses to Earnings.....	75.49%	76.42%		.93%

This statement for 1903 includes the results of operation of the Atlantic, Valdosta & Western Railway for eight months ended June 30, 1903.

The main-line mileage operated at the close of the year was 391.61 miles, as compared with 285 miles at the close of the year preceding.

Income Account for the year is shown in detail in Table A, page 10.

Profit and Loss Account as of June 30, 1903, is shown in Table B, page 10.

There was an increase of \$10,109.22, or 22.8 per cent., in taxes paid for the year as compared with the year preceding.

## FINANCIAL CONDITION.

The financial condition of the Company at the close of the year is shown in the balance sheet, Table C, page 11.

The Company has no floating debt, and has had none since its organization.

There were issued during the year \$2,000,000 of First Consolidated Mortgage Four Per Cent. Bonds and \$1,000,000 of Common Stock to pay for the Atlantic, Valdosta & Western Railway property.

## EQUIPMENT OBLIGATIONS.

G. S. & F. Ry. Equipment obligations issued during the year.....\$360,000  
Assumed during the year under purchase of Atlantic, Valdosta & Western Railway.. 147,000

Total.....\$507,000

Of which there were paid during the year:

G. S. & F. Ry. Equipment obligations.....\$18,000

A., V. & W. Ry. Equipment obligations.....65,000

Total paid.....\$83,000

Outstanding at close of the year.....\$424,000

## DIVIDENDS.

Dividends were paid during the year as follows:

Two and one-half per cent. on First Preferred Stock, paid November 4, 1902.....\$17,100  
Two per cent. on Second Preferred Stock, paid November 4, 1902.....21,680  
Two and one-half per cent. on First Preferred Stock, paid May 5, 1903.....17,100  
Two per cent. on Second Preferred Stock, paid May 5, 1903.....21,680

Total.....\$77,560

The Reserve Funds, which represent depreciation of property accrued, but not yet requiring renewal or replacement, now amount to \$165,794.39, as compared with \$39,004.11 at the close of the last fiscal year.

## PURCHASE OF THE ATLANTIC, VALDOSTA &amp; WESTERN RAILWAY.

On November 1, 1902, the Company acquired by purchase the property of the Atlantic, Valdosta & Western Railway Company, between Valdosta, Ga., and a point near Jacksonville, Fla., a total length of main line of 106.61 miles, and secured the perpetual right to use the terminals of the St. Johns River Terminal Company from said point into Jacksonville. The Company has also purchased one-eighth interest in the stock of the Jacksonville Terminal Company, which owns the Jacksonville Union Passenger Station.

## NEW EQUIPMENT.

300 box cars and 100 flat cars of the new equipment referred to in the last annual report as having been contracted for under an equipment trust were delivered during the year, leaving undelivered on June 30th 40 coal cars and 25 stock cars.

## BUILDINGS AND STRUCTURES.

An addition was made to the general office building in Macon, and new machinery placed in the shops at that point.

The depots at Bonaire, Dakota, Genoa, Grandin, Sycamore and Habira were repaired or remodeled.

A new depot at Haylow was built jointly with the Atlantic Coast Line Railroad Company.

At Jasper a new water tank and section-houses were built.

New track scales were erected at Cordele and Tifton, and the warehouse at White Springs was enlarged and the depot platform extended.

## CROSSTIES.

During the year there were placed in the track 120,809 crossties and 92 sets of switchties, in comparison with 116,049 crossties and 73 sets of switchties in the previous year.

## EQUIPMENT ON HAND JUNE 30, 1903.

Locomotives.....44  
Passenger-train Cars.....54  
Freight-train Cars.....2548  
Road-service Equipment.....13

Being, in comparison with previous year:

Increase in Locomotives.....8  
Increase in Passenger-train Cars.....9  
Increase in Freight-train Cars.....739  
Increase in Road-service Equipment.....2

## MAINTENANCE OF EQUIPMENT.

During the year repairs were made to the following:

23 Locomotives,  
45 Passenger Cars,  
1223 Freight Cars.

On June 30 there were in the shops undergoing repairs:

33 Freight Cars,  
3 Passenger Cars,  
5 Locomotives.

## MILEAGE.

Main Line, Macon, Ga., to Palatka, Fla.....285 miles.  
Valdosta, Ga., to Grand Crossing (near Jacksonville, Fla.).....106.61 "

Total length of main line.....391.61 "  
Side tracks.....50.938 "

Total length of tracks.....451.548 "

During the year 9.69 miles of 75-pound rail were laid, making total length of track relaid with 75-pound rail 110.137 miles.

4.613 miles of side tracks were built during the year.

During the year there was marked progress in the development of the territory traversed. There has been quite an addition to the population by settlers opening up new farms, and the outlook for further immigration is encouraging.

Acknowledgments of the Board are due to all officers and employees for the faithful discharge of their duties during the year.

By order of the Board.

Respectfully submitted,

SAMUEL SPENCER,

President.

## A.—INCOME ACCOUNT FOR THE YEAR ENDED JUNE 30, 1903.

To Operating Expenses and Taxes:  
Conducting Transportation.....\$505,037 54  
Maintenance of Way and Structures.....271,160 69  
Maintenance of Equipment.....329,069 29  
General Expenses.....129,134 54  
Taxes.....54,327 07

\$1,234,402 06

## Fixed Charges:

First Mortgage Bonds, \$3,801,000 at 5 per cent.....\$190,050 00  
First Consolidated Mortgage Bonds, \$2,000,000 at 4 per cent. for eight months.....53,233 33

243,283 33

## Interest on Car-Trust Notes:

G. S. & F. Ry. Equipment Trust:  
Six months at 4½ per cent. on \$360,000, less adjustment of interest in connection with advances made.....\$4,819 73  
Four months at 4½ per cent. on \$342,000.....5,130 00

\$9,949 73

## A., V. &amp; W. Ry. Equipment Trust:

Six months at 6 per cent. on \$126,000.....\$3,780 00  
Six months at 6 per cent. on \$105,000.....3,150 00  
One month at 6 per cent. on \$84,000.....420 00

7,350 00

## Dividends:

No. 11, on First Preferred Stock, 2½ per cent. paid November 4, 1902.....\$17,100 00  
No. 12, on First Preferred Stock, 2½ per cent. paid May 5, 1903.....17,100 00  
No. 8, on Second Preferred Stock, 2 per cent. paid November 4, 1902.....21,680 00  
No. 9, on Second Preferred Stock, 2 per cent. paid May 5, 1903.....21,680 00

77,560 00

Balance carried to credit of Profit and Loss.....77,338 18

\$1,649,983 30

## By Gross Earnings:

Passenger.....\$434,918 15  
Freight.....955,839 92  
Mail.....51,235 60  
Express.....78,518 92  
Miscellaneous.....114,678 45

\$1,635,191 04

Income from other sources.....14,792 26

\$1,649,983 30

## B.—PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDED JUNE 30, 1903.

Balance to credit of this Account July 1, 1902.....\$389,661 31  
Add Credit Balance of Income Account for year 1903.....77,338 18

Balance to credit of this Account June 30, 1903.....\$466,999 49

## C.—CONDENSED BALANCE SHEET, JUNE 30, 1903.

## ASSETS.

Cost of Road and Equipment:  
Cost of Road—Previous report.....\$5,961,782 33  
Additions during year—Cost of Roadway and Appurtenances of Atlantic, Valdosta & Western Railway.....\$2,929,076 63  
Cost of Real Estate at Valdosta, Ga.....850 00

\$8,891,708 96

Deductions during year—Credit Balance transferred from books of G. S. & F. R. (Old Company) after final adjustment of all accounts.....\$26,971 01

Muniment of Title to Stock of A., V. & W. Ry. Co.....1 00

26,972 01

Cost of Equipment—Previous report.....\$771,570 71

Additions during year—Cost of Equipment received with A., V. & W. Ry.....55,675 00

\$827,245 71

Deductions during year—Value of two locomotives and one steam shovel sold.....8,400 00

\$18,845 71

Total Cost of Road and Equipment.....\$9,883,583 66

Securities Owned.....250,456 10

## Material and Supplies on Hand:

Contents of Store-room and Commissary.....\$79,263 85

Rail and Fixtures—Current.....14,904 84

\$94,168 69

Rail—Leased.....31,227 27

G. S. & F. Ry. Trust Equipment.....\$342,000 00

A., V. & W. Ry. Trust Equipment.....84,000 00

\$426,000 00

Sundry Accounts.....15,448 50

## Current Assets:

Cash in hands of Treasurer.....\$381,508 82

Cash in hands of Financial Agents for payment of interest and unpaid dividends.....97,776 00

Cash in transit from Agents.....24,233 59

Due from Agents and Conductors.....15,231 12

Due from U. S. Government (Mail).....13,294 21

Due from Southern Express Co.....6,777 17

Due from other Transportation Companies.....1,727 78

Due from Individuals and Companies.....63,177 14

\$722,915 83

\$10,674,700 05

Capital Stock:		LIABILITIES.	
Common	\$2,000,000 00		
First Preferred	684,000 00		
Second Preferred	1,084,000 00		
	\$3,768,000 00		
Funded Debt:			
First Mortgage Bonds	\$1,000,000 00		
Less—			
Amount in reserve for future improvements	\$162,000 00		
Amount in Treasury of Company	37,000 00		
	199,000 00		
Outstanding	\$3,801,000 00		
First Consolidated Mortgage Bonds	2,000,000 00		
	5,801,000 00		
Equipment Obligations:			
G. S. & F. Ry. Equipment Trust	\$312,000 00		
A. V. & W. Ry. Equipment Trust	84,000 00		
	426,000 00		
Taxes Accrued, Not Due	29,400 00		
Interest on Car-Trust Notes Accrued, Not Due	5,500 00		
Reserve Funds:			
For Maintenance of Way and Structures	\$85,966 98		
For Maintenance of Equipment	75,597 41		
Miscellaneous	4,000 00		
	165,794 39		
Current Liabilities:			
Interest on Bonds due and unpaid, including amount due July 1, 1903.	\$97,250 00		
Dividends due and unpaid	526 00		
Audited Vouchers	53,540 09		
Pay-rolls (June)	48,629 65		
Wages unclaimed for	3,876 86		
Due other Transportation Companies	8,232 57		
	212,055 17		
Profit and Loss	466,939 49		
	\$10,874,739 05		

#### H.—TRAFFIC STATISTICS, YEARS ENDED JUNE 30, 1903 AND 1902. (Including Operations of the Atlantic, Valdosta & Western Railway for Eight Months from November 1, 1902.)

	1903.	1902.	Per cent. of increase or decrease.
Average miles of road operated	358.33	285	Inc. 25.73
Passenger Traffic:			
Number of passengers carried	476,297	428,407	Inc. 8.62
Number of passengers carried one mile	17,442,296	14,451,175	Inc. 20.70
Average distance per passenger	36.63	33.96	Inc. 11.13
Total revenue from passengers	\$434,918.15	\$367,901.49	Inc. 18.22
Average receipts per passenger per mile	.0249	.0254	Dec. 1.97
Total passenger-train earnings	\$68,908.42	\$462,235.22	Inc. 25.77
Passenger-train earnings per mile of road	\$1,587.67	\$1,587.14	Inc. 0.03
Passenger-train earnings per train mile	.87.13	.72.06	Inc. 20.91
Freight Traffic:			
Number of tons carried	859,639	743,849	Inc. 15.57
Number of tons carried one mile	79,205,649	66,369,659	Inc. 19.34
Average distance hauled per ton	92.138	89.224	Inc. 3.27
Total freight earnings	\$655,839.92	\$762,839.85	Inc. 25.30
Average receipts per ton per mile	.01206	.01149	Inc. 4.96
Freight earnings per mile of road	\$2,667.48	\$2,676.63	Dec. .34
Freight earnings per train mile	\$2.23.12	\$2.67.91	Dec. 16.72
Earnings and Expenses:			
Passenger and freight earnings	\$1,524,748.34	\$1,215,175.07	Inc. 25.48
Passenger and freight earnings per mile of road	\$4,255.15	\$4,263.77	Dec. .20
Gross earnings	\$1,635,191.04	\$1,290,875.96	Inc. 26.72
Gross earnings per mile of road	\$4,563.37	\$4,389.03	Inc. 3.97
Gross earnings per train mile	151.215	137.111	Inc. 10.29
Operating expenses and taxes	\$1,234,402.06	\$955,906.09	Inc. 29.13
Operating expenses and taxes per mile of road	\$3,444.87	\$3,354.05	Inc. 2.71
Operating expenses and taxes per train mile	114.152	104.777	Inc. 8.95

(Continued from Page 150.)

terments the company aims to maintain its position in the front rank of ice and refrigerating machinery manufacturers. In endeavoring to make familiar the Eclipse system of ice-making and refrigerating machinery this company's latest book is compiled, and endeavors are made to cover the ground in a chatty manner. Technicalities are avoided as much as possible, and everything is aimed to be so clear that "he who runs may read." The publication deserves especial commendation because of the clear and concise manner in which the theory and practice of ice manufacture and refrigeration is explained and for the numerous photographic reproductions of the complete machines and parts of machines used in installing Eclipse plants, many of the devices being original with and used only by the Frick Company. Those who may contemplate engaging in the conduct of an ice-making or refrigerating plant will find it to their advantage to talk over this subject with the Frick Company before entering into any contract. In estimating upon the cost of complete establishments the company gives thorough consideration to every detail, and plans to supply equipment that will afford the best possible results at the minimum expenditure consistent with highest-grade service. The machines are strong, durable, economical, convenient, symmetrical, and built on the interchangeable system. Through the company's method of keeping records each part of a plant sold is so tabulated that when orders come for parts, if they are not in stock, which may happen at times, it is possible to make them and assure a perfect fit. In order to accommodate prospective customers and facilitate business various agencies have been established under the management of competent engineers who are ready to furnish information, prices and other details to prospective purchasers. No individual or company contemplating the establishment of ice or refrigerating plants can afford to fall securing for careful perusal a copy of the "Twentieth Century Anniversary Greeting," copies of which may be obtained by addressing the Frick Company at its main offices and works, Waynesboro, Pa. Offices at Dallas, Texas, are in the Gaston Building; in Nashville, Tenn., at 604 Broad street; in St. Louis, Mo., at 514 Granite Building; in New York at 33 Cortlandt street.

## FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

### Review of the Baltimore Market.

Office Manufacturers' Record,  
Baltimore, Md., September 9.

A double holiday and a dull season combined to rob the Baltimore stock market of both activity and interest during the past week. Everything was flat. In the dealings United Railways common sold from 11 down to 10%, and then reacted; the preferred at 30%, the incomes at 63% to 67%, the 4s at 90%; Consolidated Gas at 64½ to 65%, Gas 5s at 109%; Seaboard 4s at 77½ and 77%, and the 5s at 101½ and 102; G. B. S. Brewing incomes at 32, and the 1sts at 47½ and 48.

Other securities traded in were as follows: Bank of Commerce, 28; Continental Trust, 183; Manufacturers' Bank, 103; Merchants' Bank, 188; Northern Central, 99½; Atlantic Coast Line Consolidated 4s, 90%; West Virginia Central 6s, 110; Virginia Midland 2ds, 110; Georgia & Alabama Consolidated 5s, 105½; National Enameling common, 25½; Virginia Century, 90; Georgia Southern & Florida 5s, 110; Virginia new 3s, 80½; Atlanta Street Railways 5s, 104½; Lexington Street Railway 5s, 100; Southern Railway common, 23; Baltimore Fire Insurance, 21.

### SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended  
September 9, 1903.

Railroad Stocks.	Per Bid.	Asked
Atlanta & Charlotte	100	150
Georgia Southern & Florida	100	40
Georgia Sou. & Fla. 1st Pref.	100	95
Georgia Sou. & Fla. 2d Pref.	100	67

United Railways & Elec. Co.	50	10%	10%
Seaboard Railway Common	100	20	20%
Seaboard Railway Preferred	100	33%	34%

Bank Stocks.			
Citizens' National Bank	10	28	30
Commercial & Far. Nat. Bank	100	110	...
Drovers & Mech. Nat. Bank	100	300	...
Manufacturers' National Bk.	100	103	...
National Bank of Baltimore	100	129	...
National Howard Bank	10	11%	...
National Marine Bank	30	37	...
National Mechanics' Bank	10	32	...
Second National Bank	100	190	...

Trust, Fidelity and Casualty Stocks.			
American Bonding & Trust	50	82	...
Continental Trust	100	182½	185
Fidelity & Deposit	50	150	...
International Trust	100	117	126
Mercantile Trust & Deposit	50	155	...
Union Trust	50	70	...
U. S. Fidelity & Guaranty	100	134	...

Miscellaneous Stocks.			
G. B. & S. Brewing Co.	100	11½	...
United Elec. L. & P. Pref.	50	40	...
Cotton Duck Voting Trust	100	1	2
Consolidated Coal	100	69½	80
George's Creek Coal	100	80	...
Consolidated Gas	100	64½	65½

Railroad Bonds.			
Albany & Northern	94½	95½	...
Atlanta & Charlotte 1st 7s, 1907	107	...	...
Char. Col. & Aug. 1st 5s, 1910	112½	...	...
Char. Col. & Aug. 2d 7s, 1910	112½	...	...
Columbia & Greenville 1st 6s, 1916	112½	...	...
Georgia, Car. & North. 1st 5s, 1929	106½	107	...
Georgia South. & Fla. 1st 5s, 1945	109½	111	...
Georgia Pacific 1st 6s, 1922	118	...	...
Petersburg, Class A 5s, 1926	106½	...	...
Petersburg, Class B 6s, 1926	114½	...	...
Piedmont & Cum. 1st 5s, 1911	105	...	...
Raleigh & Augusta 1st 6s, 1926	117	119	...
Richmond & Danville Gold 6s, 1915	113	...	...
Savannah, Fla. & West. 5s, 1934	108½	...	...
Southern Railway Con. 5s, 1994	112	...	...
Virginia Midland 4th 3-5s, 1921	106	...	...
Virginia Midland 5th 5s, 1926	107	...	...
West. North Carolina Con. 6s, 1914	112½	113	...
West Virginia Central 1st 6s, 1911	109½	110	...
Wilmington, Col. & Aug. 6s, 1910	109	112	...
Wilmington & Wel. Gold 5s, 1935	115	117	...
Charleston Con. Electric 5s, 1999	90	...	...
Newport News & Old Pt. 5s, 1938	106	...	...
Norfolk Street Railway 5s, 1944	106	109	...
United Railways 1st 4s, 1949	90%	90%	...
United Railways Inc. 4s, 1949	63½	63½	...
Seaboard 10-year 5s	77½	78	...
Seaboard 10-year 5s	101½	102½	...
Georgia & Alabama Con. 5s	106	...	...

Miscellaneous Bonds.			
G. B. & S. Brewing 1st 3-4s	47	48	...
G. B. & S. Brewing 2d Incomes	31	32	...
United Elec. Light & Power 4½s	83	84	...
Consolidated Gas 6s, 1910	109	...	...
Consolidated Gas 5s, 1939	110	...	...

## SOUTHERN COTTON MILL STOCKS

Quotations Furnished by Hugh Mac-  
Rae & Co., Wilmington, N. C., for  
Week Ending September 8.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.)	75	...
Alken Mfg. Co. (S. C.)	90	...
Anderson Cotton Mills (S. C.)	125	130
Arkwright Mills (S. C.)	105	...
Augusta Factory (Ga.)	64	...
Avondale Mills (Ala.)	90	95
Belton Mills (S. C.)	100	102
Bibb Mfg. Co. (Ga.)	108½	...
Brandon Mills (S. C.)	100	105
Buffalo Cotton Mills (S. C.)	101	105
Buffalo Cotton Mills (S. C.) Pfd.	100	100
Cabarrus Cotton Mills (N. C.)	122	...
Chiquita Mfg. Co. (S. C.)	95	...
Clifton Mfg. Co. (S. C.)	102	...
Clinton Cotton Mills (S. C.)	132½	...
Courtenay Mfg. Co. (S. C.)	125	...
Columbus Mfg. Co. (Ga.)	95	...
Dallas Mfg. Co. (Ala.)	90	...
Darlington Mfg. Co. (S. C.)	100	...
Eagle & Plank Mills (Ga.)	100	...
Easley Cotton Mills (S. C.)	99	101
Enoree Mfg. Co. (S. C.)	85	...
Enterprise Mfg. Co. (S. C.)	80	...
Exposition Cotton Mills (Ga.)	150	...
Gaffney Mfg. Co. (S. C.)	99	...
Granby Cot. Mills (S. C.) 1st Pfd.	98½	...
Granville Mfg. Co. (S. C.)	160	...
Greenwood Cotton Mills (S. C.)	99	102
Grendel Mills (S. C.)	100	103½
Hamlet Mills (N. C.)	80	...
King John P. Mfg. Co. (S. C.)	80	...
Lancaster Cotton Mills (S. C.)	100	110
Lancaster Cot. Mills (S. C.) Pfd.	100	...
Langley Mfg. Co. (S. C.)	90	...
Laurens Cotton Mills (S. C.)	170	...
Lockhart Mills (S. C.)	95	100
Louise Mills (N. C.)	95	...
Louise Mills (N. C.) Pfd.	101	...
Marlboro Mills (S. C.)	95	...
Manchester Cotton Mills (S. C.)	90	...
Mills Mfg. Co. (S. C.)	99	...
Mills Mfg. Co. (S. C.) Pfd.	100	...
Monarch Cotton Mills (S. C.)	95	102
Monaghan Mills (S. C.)	90	102
Newberry Cotton Mills (S. C.)	120	...
Norris Cotton Mills (S. C.)	107	109½
Olympia Cotton Mills (S. C.) Pfd.	90	...
Odell Mfg. Co. (N. C.)	98	102
Orangeburg Mfg. Co. (S. C.) Pfd.	102	...
Orr Cotton Mills (S. C.)	100	102
Polet Mfg. Co. (S. C.)	105	110
Pelzer Mfg. Co. (S. C.)	165	170
Piedmont Mfg. Co. (S. C.)	176	...
Poe, F. W., Mfg. Co. (S. C.)	145	...
Richland Cotton Mills (S. C.) Pfd.	98½	...
Ronoke Mills (N. C.)	98	102
Saxon Mills (N. C.)	100	102
Sibley Mfg. Co. (Ga.)	60	66
Southern Cotton Mills (N. C.)	95	...
Spartan Mills (S. C.)	135	140
Trion Mfg. Co. (S. C.)	125	150
Tuacpan Mills (S. C.)	142	...
Union Cotton Mills (S. C.)	157½	...
Union Cotton Mills (S. C.) Pfd.	100	103½
Victor Mfg. Co. (S. C.)	129	133
Warren Mfg. Co. (S. C.)	101½	107½
Warren Mfg. Co. (S. C.) Pfd.	105½	...
Washington Mills (Va.)	10	...
Washington Mills (Va.) Pfd.	50	101
Wilmington Cot. Mills (N. C.) Pfd.	100	...
Wiscasset Mills (N. C.)	118	...
Woodruff Cotton Mills (S. C.)	96	97½

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The Bank of Wynne has been incorporated at Wynne, Ark.; capital \$30,000. The incorporators are O. N. Killough, president; J. L. Hare, vice-president; T. A. Bradford, Jr., secretary; W. H. Barnes, cashier; W. W. Shaver, W. Smith, M. E. Killough, J. W. Killough, F. E. Cary, D. F. Hall, W. S. Coffin, F. B. Rolfe, N. B. Martin, Mayo & Robinson, G. W. Eldridge, J. Ed Wilson, McDonald Bros., J. O. Minton, W. A. Dickey, J. T. Patterson, J. J. Ogg, Fredericktown Trust Co., Mrs. Anna Gailey and Wes Hall.	
Gonzales, Texas.—The city has sold \$7000 of street bonds and \$8000 of fire-department bonds.	
The Drovers and Mechanics' National Bank of Baltimore has been appointed a reserve agent for the National Bank of Commerce of Norfolk, Va.	

(For Additional Financial News, See  
Pages 28 and 29.)



**Hambleton & Co.****BANKERS and BROKERS,**

Members New York and Baltimore Stock Exchanges.  
**17 S. Calvert St., BALTIMORE.**  
 High-grade Investment Bonds, Municipal, Railway, Industrial.  
 Letters of Credit Available Everywhere.

**CONDENSED STATEMENT OF THE  
First National Bank of Richmond, Va.**

JUNE 9, 1908.

**RESOURCES.**

Loans and Discounts	\$5,561,733.73
U. S. Bonds at par	612,500.00
Overdrafts	40.75
Other Stocks and Bonds	413,607.78
Banking House and other Real Estate	60,743.73
Cash and Due from Banks	909,896.70
	\$6,548,521.69

**LIABILITIES.**

Capital	\$600,000.00
Surplus and Profits (net)	502,346.66
Reserved for Interest	7,658.72
Circulation	893,590.00
Deposits	3,398,623.31
U. S. and Va. Bond Account	408,500.00
	\$6,548,521.69

**Calvin N. McAdoo**

Banker and Broker,

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 Pres. National Bank of Port Deposit, Md.  
 SUMMERFIELD BALDWIN, of  
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**American Bankers' Convention.**

The program for the annual convention of the American Bankers' Association, which is to be held in San Francisco from October 20 to October 23, inclusive, is in course of preparation. Particular interest will attach to the report of the special currency committee appointed at last year's convention. The report is not expected to be completed until very near the date of the convention. One of the features of the convention will be a special meeting of the trust-company section, and the savings-bank representatives will also hold a meeting to discuss subjects of peculiar interest to such institutions.

In reviewing the work of the association in his recent report Secretary Branch says:

"We can positively assert that professional criminals are selecting for attack banks not members of this association. Out of a membership of nearly 7000 there have been eighty-five attacks on our members since 1895, resulting in a total loss of \$70,526.51. In the same space of time 553 non-members have been attacked, resulting in a loss of \$697,383.11. Besides our protective feature, energetic, active and watchful committees are working on the subjects of 'Education of Bank Clerks' and 'Uniform Laws.' Owing to the work of our fidelity committee our members are receiving annually a reduction of \$150,000 on their fidelity bonds."

Since September 1, 1902, the association has increased by 741 banks, making now a total paid membership of 6921.

**Georgia Southern & Florida.**

The ninth annual report of the Georgia Southern & Florida Railway for the fiscal year ended June 30, 1903, shows earnings \$1,635,191, increase \$384,315; expenses \$1,234,402, increase \$278,495; net earnings from operation \$400,788, increase \$105,819; ratio of expenses to earnings 75.49 per cent., decrease .03 per cent. This statement for 1903 includes the results of operation of the Atlantic, Valdosta & Western Railway for eight months ended June 30. The main line operated at the close of the year was 391 miles, as compared with 285 miles at the close of the preceding year. The company has no floating debt. During the year \$2,000,000 of first consolidated mortgage 4 per cent. bonds and \$1,000,000 of common stock were issued to pay for the Atlantic, Valdosta & Western Railway. The fixed charges paid during the year amounted to \$243,383.33, divided as follows: Interest on 5 per cent. first mortgage bonds, \$190,050; interest on 4 per cent. first consolidated mortgage bonds (\$2,000,000 for eight months), \$53,333.33. There was also paid interest on car-trust notes amounting to \$17,299.73 and dividends on first and second preferred stock amounting to \$77,560, leaving a balance carried to credit of profit and loss \$77,338.18. The total balance to credit of profit and loss is thereby increased to \$466,999.49.

**New Corporations.**

The Citizens' Bank has begun business at Maury City, Tenn.

The Bryan County Bank has begun business at Pembroke, Ga.

The Bank of Carteret has begun business at Morehead City, N. C.

It is reported that a bank will be established at Tolar, near Granbury, Texas; capital \$50,000.

The People's Bank of Seabree, Ky., capital \$20,000, has been incorporated by H. C. Bailey, J. B. Ramsey, W. I. Smith and others.

The Merchants' National Bank will, it

is reported, be organized at Brownsville, Texas, by J. G. Fernandez of Columbus, Texas, and others.

The Bank of Leakesville at Leakesville, Miss., capital \$50,000, has been chartered by E. F. Ballard, J. H. Turner, S. R. McKay and others.

The Bank of Quitman has begun business at Quitman, Ark. J. M. Jenkins is president; C. W. Martin, vice-president, and R. L. Kane, cashier.

The Bank of Auburn at Auburn, Tenn., capital \$10,000, has been incorporated by H. E. Potter, D. D. Overall, B. W. Robinson, H. L. Overall and W. H. Overall.

The First National Bank of Frost, Texas, capital \$25,000, has been organized by J. L. Halbert, N. F. Drain and Chas. H. Mills of Corsicana, G. J. Heflin and C. B. Hightower.

The Bank of Piedmont, S. C., has received its commission; capital \$15,000. The incorporators are W. A. Simpson, W. H. Hammett, Joseph Norwood and James L. Orr.

The First National Bank of Canton, Miss., capital \$50,000, has been organized by electing W. B. Weiner president; J. J. McGrath, vice-president, and Mr. Flounoy, secretary and treasurer.

The Bank of Henry, capital \$50,000, has begun business at Abbeville, S. C. The officers are Dr. Albert S. Stegall, president; Hon. John B. Ward, vice-president, and N. F. Chaeirs, cashier.

The First National Bank of Taloga, O. T., capital \$25,000, has been approved. The organizers are J. C. Strang, Guthrie, O. T.; George E. Block, F. L. Block, M. Shultise and John Bosworth.

The First National Bank of Excelsior Springs, Mo., has been approved; capital \$25,000. The organizers are C. S. Jones, William A. Wilson, E. L. Morse, W. Y. Morgan and G. B. Gray.

The Citizens' Banking Co. has been organized at Dublin, Ga.; capital \$50,000. Among the charter members are E. P. Rentz, William Pritchett, J. D. Smith, C. W. Brantley and J. H. Beacham.

The St. Louis Securities Co., capital \$100,000, has been incorporated in St. Louis, Mo., by James B. Goode, Joseph Flory, H. M. Whitney, J. T. Lynn, W. T. Hess, G. O. Rogers and F. M. Estes.

The Jefferson Insurance Co., a private banking incorporation in Texas, has changed its name to the First State Bank, with principal office at Hillsboro, Texas; capital \$100,000. It may establish branches.

The Concord Banking Co., capital \$25,000, has been organized at Concord, Ga. The directors are C. T. Smith (president), R. A. Mallory (vice-president), G. E. Strickland (cashier), R. C. Mathews and R. E. Lee.

The Liberty Banking Co. of Hinesville, Ga., has applied for a charter; capital \$25,000. The incorporators are L. Carter of Wayne county, N. McQueen, H. P. Remis, J. R. Ryan and J. M. Caswell of Liberty county.

The Bank of Commerce, capital \$50,000, has been chartered at Louisville, Miss. Parties connected with the Merchants and Farmers' Bank of Macon, Miss., and New York and Cincinnati capitalists are interested.

An insurance company has been organized at New Castle, Ky.; guarantee fund \$70,000. The officers are Judge William Carroll, president; I. W. Kelley, vice-president; S. J. Douthitt, secretary, and W. W. Turner, treasurer.

The Mabry Securities Co. has been incorporated at Selma, Ala., to conduct a general business in real estate and brokerage; capital \$100,000. The incorporators are R. H. Mabry, Roger Jones, E. C. Melvin and W. N. Thompson.

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T. E. WITTERS, Sec'y &amp; Mgr.

THOS. L. BERRY, Treasurer

AGENCIES:

Equitable Trust Company, Augusta, Ga.  
American Trust & Banking Co., Atlanta, Ga.  
Other agencies will be established where needed.

Correspondence Solicited.



at Middlesborough, Ky., has been approved; capital \$50,000. The organizers are R. C. Ford, Middlesborough; Emil S. Helburn, J. Goodfriend, C. N. Miller, C. M. Woodbury, Ray Moss and others.

The First National Bank of Hughes Springs, Texas, has begun business. The directors are C. H. Morris, president; W. B. Duncan and T. B. Keasler, vice-presidents; J. M. Mitchell, cashier; P. W. Goodson, J. M. Murphy and J. G. Hussey.

A new bank is reported as being organized at Stanton Depot, Tenn.; capital \$15,000. Those interested are J. G. Rawlins, president; Howell Taylor, vice-president; J. H. Gibson, cashier; J. Y. Barbee, L. C. Newman, W. B. Nash, J. C. Holland and W. J. Coppedge.

The Laurel National Bank has begun business at Laurel, Miss.; capital \$100,000. It has purchased the People's Bank. The directors are Ed D. Peirce, L. L. Denson, S. H. Floyd, T. G. McCallum, S. W. Lindsey, F. M. Sheppard and C. M. McDonald; Ed D. Peirce, president, and C. M. McDonald, cashier.

The Merchants and Planters' Bank, capital \$15,000, has been organized at Silver Creek, Miss., with the following officers: F. F. Becker, president; D. C. Griffith, vice-president; R. L. Longino, cashier. The directors are F. F. Becker, D. C. Griffith, R. L. Longino, William Ross, J. W. McGrath, L. Cohn and A. T. Longino.

The Bank of Honea Path has been organized at Honea Path, with the following board of directors: R. M. Shirley, James D. Hammen, J. R. Wright, J. F. Shirley, L. O. Harper, J. Q. West and W. A. Erwin; capital \$25,000. The officers are: R. M. Shirley, president; James D. Hammett, vice-president; T. R. Finley, cashier.

The Life & Casualty Insurance Co. of Tennessee has been organized at Nashville. The charter states the capital is \$25,000. It will succeed to the business of the Traders' Life Insurance Co. of Illinois, and the officers are A. M. Burton, president; Guilford Dudley, vice-president; A. L. Haralson, secretary; J. C. Franklin, treasurer, and P. M. Estes, chief counsel.

#### New Securities.

Greensboro, N. C.—Guilford county will soon sell \$300,000 of good-roads bonds.

Hawkinsville, Ga.—An election will be held September 14 to vote on bonds for water-works and sewers.

Austin, Texas.—The State board of education has purchased \$14,000 of Medina county bridge bonds.

Macon, Ga.—The city will, it is reported, soon hold an election to vote on an issue of \$20,000 of town-hall bonds.

Muskogee, I. T.—The Territorial Bank & Trust Co. has purchased \$80,000 of 5 per cent. school bonds issued by Muskogee.

Memphis, Tenn.—The Memphis Trust Co. has purchased \$75,000 of school bonds from the city at a premium of nearly 1 per cent.

Nashville, Tenn.—The city has sold the last of its \$200,000 of 4 per cent. special street and sewer bonds to Farson, Leach & Co. of New York, who took \$179,000 of the bonds, the rest being taken by local capitalists.

Atlanta, Ga.—It is announced that the city has sold all of its \$200,000 of bonds to be issued this year. The sinking-fund commission will take \$97,000, while \$60,000 will go to local banks; \$20,000 will be taken by companies furnishing the city pipe, and \$23,000 will be taken by a syndicate.

#### Financial Notes.

Messrs. J. P. Hornaday & Co., dealers in investment securities, have taken an

office in the new Traction Building, Cincinnati.

The third annual convention of the South Carolina Bankers' Association is to be held at Columbia on October 6 and 7.

The Orleans levee board at Baton Rouge, La., called in for redemption on September 1 \$100,000 of its 5 per cent. bonds, and has already paid off \$75,000 worth.

#### Tour to the Pacific Coast via Pennsylvania Railroad, Account Meeting National Bankers' Association.

On account of the meeting of the National Bankers' Association, to be held at San Francisco, Cal., October 20 to 23, the Pennsylvania Railroad Co. offers a personally-conducted tour to the Pacific coast at remarkably low rates.

This tour will leave New York, Philadelphia, Baltimore, Washington and other points on the Pennsylvania Railroad east of Pittsburgh, Wednesday, October 14, by special train of the highest grade Pullman equipment. A quick run westward to San Francisco will be made via Chicago, Omaha, Cheyenne and Ogden.

Five days will be devoted to San Francisco, allowing ample opportunity to visit the nearby coast resorts. Returning, stops will be made at Salt Lake City, Colorado Springs, Denver and St. Louis. The party will reach New York on the evening of October 31.

Round-trip rate, covering all expenses for eighteen days, except five days spent in San Francisco, \$190.

Rates from Pittsburgh will be \$5 less. For full information apply to ticket agents or Geo. W. Boyd, general passenger agent, Broad Street Station, Philadelphia, Pa.

#### World's Fair Station.

In view of the fact that many thousands of people will travel to St. Louis over the Wabash Railroad, it is interesting to remark the facilities provided by this road. The Wabash has definitely determined upon the plans for a large station and terminal at the approach of the exposition. The Wabash road will build a station with 300 feet of frontage on a grand entrance plaza 400x700 feet which the exposition will maintain at the main gateway at Lindell and De Baliviere avenues. The plaza will be cut off the end of the Catlin tract, on which The Pike is to be located. A subway 200 feet wide will carry street-car passengers under the main tracks of the Wabash where they cross De Baliviere avenue at Forsyth Junction. The tracks will be elevated at this point. At no point near the main gateway of the World's Fair will different kinds of traffic cross on the same level. Fifteen spur tracks will leave the Wabash main line 1500 feet east of De Baliviere avenue, and, entering the eastern portion of the Catlin tract at that point, will run directly into the station by the interlocking system. Provision has been made in the trackage plans to assure the unloading or loading of at least 50,000 passengers every day. Excursion trains will enter and leave the terminal spurs on the same track. The Wabash main line will carry four tracks for the entire distance along the north front of the exposition. Through trains will stop at platforms along the main tracks on the north side of the leased tract and in the immediate proximity to the World's Fair station.—Buffalo Courier, July 27, 1903.

#### New York City Excursion, \$5 Round Trip, Through the Deerfield Valley, Down the Hudson River, October 1, via the Boston & Maine Railroad.

Of all the beautiful trips which are yearly offered, the annual excursion via the Boston & Maine Railroad to New York city is foremost.

This trip is via the famous Hoosac Tunnel Route, through the Hoosac mountains, along the Deerfield valley and the Berkshire hills, through a grand portion of Eastern New York State to Albany, N. Y.

A royal welcome will be extended at Albany, and special preparations have been made to entertain the visitors. From Albany, N. Y., the trip is via the steamer down the Hudson river. No painter can portray, neither can any description do justice to the scene which meets one's gaze, a succession of interesting places, historical landmarks, scenic landscapes, mountains, valley, caves and cliffs, palisades and forts—all are passed, and then

when one enters the sound, what a sight, strange and interesting, meets the gaze. The view of New York harbor in the early morning is a scene impressive and interesting. Hundreds of crafts, sailing yachts, rowboats, tugs, fishing smacks and ocean liners are all playing their busy part. The beautiful steamer docks at Desbrosses-street pier and sightseeing in the city of New York commences. Go where you please, there are a hundred, yes, a thousand, points of interest in the metropolis.

Leaving New York the return trip to Boston is via the Fall River Line and to Providence and Worcester via the Providence Line steamers.

The rate is \$5 for the round trip from Boston, Worcester and Providence. The train leaves Boston at 8.55 A. M., October 1, arriving in Albany, N. Y., at 7.40 P. M. You can take the night boat for New York city, which leaves at 8 P. M. down the Hudson, and arrive in New York at 6 A. M., October 2, or you can stop one night in Albany, visit the interesting places in this city, and take the day line boat to New York city, leaving Albany at 8 A. M., October 2, arriving in New York at 6 P. M. that night. You can leave New York October 2 or 3 via the Fall River Line for Boston, or if you desire to stop longer in New York, upon depositing your ticket with \$2 at the dock office of the Fall River Line, the limit will be extended ten days.

Consider this trip for \$5! A ride through the "Hoosac Mountains," the "Berkshire Hills" and the prettiest portion of "Eastern New York State," a sail down the "Hudson River" and an ocean trip back to Boston in a palatial steamer. Round-trip tickets will be on sale at 322 Washington street, Boston, and at Union Station ticket office.

Tickets will be on sale on and after September 23.

#### Virginia-Carolina Chemical Co.

RICHMOND, VA., Sept. 8th, 1903.

The Board of Directors have this day declared a dividend of 25 (two per cent.), the same being quarterly dividend No. 32, on the Preferred Stock of this Company, payable October 15th, 1903, when checks will be mailed to all Preferred Stockholders of record, at the close of business, September 30th. The books for the transfer of Preferred Stock will be closed from October 1st to October 15th, both days inclusive.

S. W. TRAVERS, Treasurer.

#### PALMETTO BANK & TRUST CO.

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CAPITAL \$250,000.

GENERAL BANKING BUSINESS TRANSACTED.

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#### HIGH GRADE

7 per cent. Preferred Stocks, in modern, up-to-date Southern Cotton Mills. Other investment securities also.

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Southern Investments,  
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Correspondence Invited.

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JASON C. MOORE, Treasurer  
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References by permission:

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#### The Exchange Bank, MACON, GA.

J. W. CANNIBS, Pres. C. M. Orr, Cash.

W. H. BURDICK, Asst. Cash.  
Capital, \$500,000.00  
Surplus and Undivided Profits, 131,028.69  
Best facilities for making Collections at lowest rates. Correspondence invited.

#### FOR SALE.

One \$5,000 State of Georgia 3 1/2% Registered Bond, due January, 1933, to yield 3.15%.

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Established 1835.

#### The Merchants National Bank, BALTIMORE, MD.

DOUGLAS H. THOMAS, President.  
WM. INGLE, Cash. J. C. WANDS, Asst. Cash.

Capital, \$1,500,000.  
Surplus and Profits, \$893,000.  
Deposits, \$10,150,000.

Accounts of Banks, Bankers, Corporations and Individuals solicited. We invite correspondence.



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## PROPOSALS.

### When Competitive Bids are Wanted

from first-class firms, these columns are invaluable in reaching engineers, architects, builders and contractors on railroad construction (steam and electric), water works, sewerage, electric light plants, municipal improvements, buildings and all public franchises and utilities throughout the entire country. Rate—30 cents per line per issue.

When the next regular issue of the Manufacturers' Record is too late for quick bids, the Daily Bulletin of the Manufacturers' Record will bring immediate results, as it is published every business day in the year, reaching many of the leading engineers, contractors, manufacturers and others, North, East, South and West.

Jno. C. Stanfield, Supervisor Washington County, Holston, Va., who advertised in the proposal columns of the Manufacturers' Record for bids on the steel bridge across the Holston River, Va., writes in regard to the results obtained from this advertisement, as follows:

"My advertisement in your paper was entirely satisfactory. I had twelve bidders from the different States, and, in my opinion, I thought this was a good representation of the bridge builders of the country. I will most heartily endorse your paper as the one to advertise in."

W. D. Arthur, Secretary of the Carnegie Library Building Committee, Union, S. C., who inserted in these columns an advertisement for designs for the Carnegie Library to be erected in Union, says:

"The results of the advertisement were very satisfactory."

**TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., August 31st, 1903.**—Sealed proposals will be received at this office until 3 o'clock P. M. on the 7th day of October, 1903, and then opened, for the installation of a conduit and electric wiring system for the U. S. Custom House and Post Office at Newport News, Virginia, in accordance with the drawings and specification, copies of which may be obtained at this office or at the office of the Superintendent of Construction at Newport News, Va., at the discretion of the Supervising Architect. **JAMES KNOX TAYLOR, Supervising Architect.**

**TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., September 1st, 1903.**—Sealed proposals will be received at this office until 3 o'clock P. M. on the 7th day of October, 1903, and then opened, for the installation of an electric wiring system for the extension of the U. S. Post Office, etc., Scranton, Pa., in accordance with the drawings and specifications, copies of which may be obtained at this office or at the office of the Superintendent of Construction at Scranton, Pennsylvania, at the discretion of the Supervising Architect. **JAMES KNOX TAYLOR, Supervising Architect.**

**TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., August 23, 1903.**—Sealed proposals will be received at this office until 3 o'clock P. M. on the 30th day of September, 1903, and then opened, for the installation of two electric passenger elevators in the United States Appraiser's Warehouse, New York, N. Y., in accordance with the drawings and specifications, copies of which may be obtained at this office, at the discretion of the Supervising Architect. **JAMES KNOX TAYLOR, Supervising Architect.**

### ABBEVILLE, SOUTH CAROLINA. \$20,000.

**SEALED PROPOSALS** will be received until October 15th, 1903, at 6 o'clock P. M., for the purchase of twenty thousand dollars sewerage bonds of the City of Abbeville, bearing interest at five per centum per annum (payable annually or semi-annually, to suit purchaser), maturing forty years from date, with option of payment after twenty years from date. Denomination to suit purchaser, except must be \$1000 or less. Bonds dated October 15, 1903.

Assessed valuation of city property is \$1,193,226. Real valuation \$3,500,000. The total debt with this issue is \$71,300. Population, 4500. Right is reserved to reject any and all bids. All bidders must deposit certified check for \$200 to insure sale if bid accepted.

**JAMES CHALMERS, City Clerk.**

**BIDS** will be received until September 20 for the erection of a Brick Church, with stone trimmings and a slate roof, at Greenwood, Miss. Plans and specifications are on file in the office of Gardner & McClurg at Greenwood, Miss. The right to reject any bid or any part of a bid is reserved.

**W. T. FOUNTAIN, Greenwood, Miss.**

### DRIVING DEEP WELLS.

**LOUISBURG, N. C.**  
Sealed proposals will be received by the "Committee on Water-Works and Sewerage" of Louisville, N. C., up to 6 o'clock P. M. on the 22d day of September, 1903, for the driving of one or more Deep Wells for a public water supply system. General specifications may be procured from the Secretary.

Each bid must be accompanied by a certified check for one hundred (\$100) dollars, drawn payable to T. H. Lacy, Secretary.

The right to reject any or all bids is expressly reserved.  
**WM. BAILY, Chairman.**  
**T. H. LACY, Secretary.**

### NOTICE.

**SEALED PROPOSALS** will be received at the office of W. H. Bower, General Manager, Elkins, West Virginia, for the graduation and masonry, classified and unclassified, on about ten miles of single track railroad from mouth of Copen Run near Burnsville, Braxton County, West Virginia, to a point on Perkins Fork of Cedar Creek, including one 1100 foot tunnel. Plans and profile can be seen at the General Office, Elkins, West Virginia, or at the office of Mr. A. A. Chapman, Engineer, Weston, West Virginia. The Company reserves the right to reject any and all bids.

**HENRY G. DAVIS, President,**  
**Coal & Coke Railway Co.**

### COUNTY JAIL.

**SEALED PROPOSALS** will be received by the Commissioners of Brunswick County, at their office in Southport, N. C., until 2 o'clock P. M., Monday, September 28th, 1903, for the construction of a County Jail with steel cells. Plans and specifications can be obtained from the Clerk of the Board of Commissioners, or can be seen at his office.

**M. C. GUTHRIE,**  
**Chairman County Commissioners.**  
**Southport, N. C., August 21st, 1903.**

### Notice to Contractors.

For the furnishing of labor and materials for the erection of a new Courthouse and Jail, in accordance with the plans and specifications now on file in the Probate Judge's Office at Dothan, Ala., and prepared by Andrew J. Bryan & Co., Architects, of New Orleans, La., 1104 Bienville Building, and under their supervision, the Board of County Commissioners of Houston County, Alabama, will receive bids up to 12 o'clock noon, Monday, November 2, 1903, at which time the same will be opened. All bids must be addressed to the "HON. GEORGE LESLIE, Probate Judge, and marked 'COURTHOUSE PROPOSALS'." The same must be in his hands on or before 12 o'clock of the above day, or they will not be received.

Each bidder must submit with his proposal for the Courthouse a certified check in the amount of Twenty-five Hundred (\$2500) Dollars, and also a certified check with his proposal for the Jail in the amount of One Thousand (\$1000) Dollars, as a guarantee of good faith that he will, if his bid should be accepted, make and execute a Surety Company Bond satisfactory to the Board, in the amount of the Contract Price for each building. In failure so to do, in either case, the check so submitted will be forfeited to the County as damage.

The two buildings will be constructed of such materials as are set forth in the plans and specifications. Concrete footings, hard-burned brick laid in cement in foundations. The exterior will be pressed brick and stone; the roof covered with slate, and the floors to be fireproof construction. Ceilings to be stamped steel.

Payments to be made in cash.  
For information pertaining to the general financial conditions of the County, confer with Hon. George Leslie, Probate Judge. For information pertaining to plans and specifications, confer with the architects. All persons desiring to bid on the above work can secure plans and specifications upon application to the architects, together with proposal sheets. The Board of County Commissioners reserves the right to accept any or reject all bids.

### Architects, Engineers & Owners,

to whom time is of great importance, should write for information in regard to our ability to rush work.

### Frank B. Gilbreth,

**General Contractor.**

**Boston. New York. London.**

## THE BOURNE-FULLER CO.

### IRON, STEEL, and PIG IRON.

**Cleveland, O.**

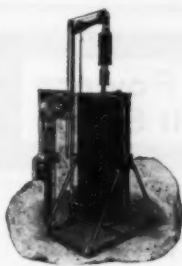
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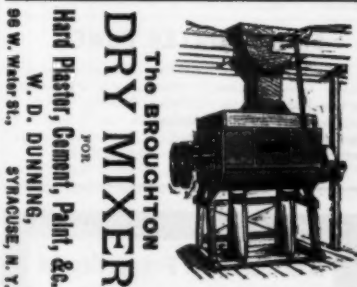
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If you want to reach the possible land buyers and investors in the North and West who are thinking of locating in the South, advertise in the SOUTHERN FARM MAGAZINE. Published by the Manufacturers' Record Publishing Co., Baltimore, Md.

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150,000 Acres.

Containing Pine, White Oak  
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Located in North Louisiana, along the  
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A great deal of these lands are valua-  
ble for farming purposes after the tim-  
ber is cut off. For particulars apply to

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Land Commissioner,  
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### COAL LAND

FOR SALE.

Situate in Western Kentucky.

1100 acres in fee simple, 800 acres of which are  
in forest. Carrying three 4-ft. seams bituminous  
coal of superior quality, analysis showing—vola-  
tile, 43-47 per cent.; carbon, 50-53 per cent.; ash,  
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geology of the country, known as seams Nos. 1, 3  
and 4; No. 1 being the lowest. No. 4 coal outcrops  
and No. 3 has been penetrated by prospect shaft  
about 50 ft. in depth. Both seams, No. 4 and No.  
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from partings, have good roof, and ample super-  
incumbent strata to allow safe working. No. 1  
coal not yet exploited on land, but from geological  
section should be about 80 ft. below No. 3 seam.  
Dip about 1 inch to the yard, and in direction of  
roadway runs through one side of property.  
Price \$25,000.

Address **A. H. REED,**

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(By Owner.)

650 acres of Coal Property located on  
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This land carries two seams of Splint  
and one of Coking Coal. Shipping fa-  
cilities, Kanawha River and C. & O. R.  
W. There is one running mine on the  
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hundred tons. Address,

Box 8,

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West Virginia.

Parties desirous of investing in Tim-  
ber, Coal, Lime or Cement properties in  
West Virginia are respectfully invited  
to apply to

**R. P. PEARSON,**

Mining Engineer and Surveyor.  
Parsons, Tucker Co., W. Va.

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COAL and IRON Properties  
are my Specialty.

If you have a dividend-paying property to sell  
or wish to buy, write me. The larger the deal the  
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Forty-Three Thousand Acres of Fine  
Hard Wood Timber Land

in one body, on railroad. Address,  
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UNRIVALLED LOCATION FOR  
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**WATER POWER** 24 Hours  
Use Daily.

\$15.00 per Horse Power per Year.  
46 Feet Head and Fall at

**Weldon, North Carolina**

80 miles from Norfolk, Va. 12 hours travel  
from New York City. At junction of A.  
C. L. and S. A. L. Railway Systems.  
Steamboat to tidewater.

Free Building Sites, Banks, Schools,  
Electric Lights and Electric Power.

**ROANOKE NAVIGATION &  
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**JAS. W. WILSON, President,**  
Write for Booklet. **WELDON, N. C.**

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In New Orleans for a saw mill and wood working  
factory, with some timber land and access to  
more. Will sell or join party with capital to es-  
tablish business. Rail and water transportation.

**LLOYD POSEY,**  
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### 50 H. P. WATER POWER.

May be doubled. Location four miles to rail-  
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or wood manufacturing, brick making. Want to  
sell interest in the business to active man who  
can take charge and manage. Now running 2 3/4  
water wheels on wheat, corn and lumber.  
Address H, Box 1, Fredericksburg, Va.

### Miscellaneous Properties and Investment Opportunities.

### Saw Mill Plant

FOR SALE.

Consisting of 16x24 slide valve engine,  
8 boilers, wheel and carriage, dry kiln  
piping, lath machinery, 30 head very  
heavy mules and horses, drays, etc. All  
new; only in use one year; now in op-  
eration.

Will sell in part or whole. Schedule  
upon application. Address

**WOODWARD LUMBER CO.**  
ATLANTA, GA.

### FOR QUICK ACCEPTANCE.

We offer for sale an up-to-date milling plant, with  
dry kiln and planing mill attached. At the junction  
of two trunk lines of railroad. Timber has been es-  
timated to cut about 22,000,000 feet. Rate to Brunswick,  
Ga., a deep water port, \$6.00 per car. Price \$25,000  
cash.

This is a going concern and is ready for buyer to  
step right into a paying business. Good reasons given  
for wanting to sell.

**BROBSTON, FENDIG & CO.,** Brunswick, Ga.

### For Sale.

The Old Pickens Plantation.

Located near Dyson's Post Office on C. & W.  
C. R. R., containing 1900 acres. 1600 acres in  
Greenwood County and 300 acres in Newbury  
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twelve tenant houses. Iron bridge spans  
Saluda River, which flows through plantation.  
Best STOCK FARM in South Carolina. Price  
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House Established in 1884.

Desires to represent as agent through-  
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American manufacture. Will travel at  
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Write Correspondence in Spanish or French.

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Flour Mill, Elevator, Planing Mill,  
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To settle the estate of Wm. Ward, deceased, I  
offer for sale his splendid combined Flour Mill,  
Elevator, Planing Mill and Electric Light Plant,  
at Lancaster, Ky. Flour mill has 75 barrels capa-  
city, just refitted with the most modern machinery  
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For Sale—Several thousand acres tract first-class  
Yazoo Delta cotton land on Ill. Cen. R.R. and Mis-  
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company of nonresident owners through a resi-  
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**SMALL MANUFACTURING PLANT  
FOR SALE VERY CHEAP.**

Can be made a great money maker. Will sell  
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In Philadelphia or vicinity, a building  
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than 6000 sq. ft. in area. Ceiling not  
lower than 14 ft. With or without power.  
Must be on or near railroad. Address  
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**"Millions for Farmers"**  
**TEXAS TOBACCO FACTS**  
Exhaustive tests prove  
that the finest grade of  
The **SOUTHERN PACIFIC**  
Soils and Climate similar to famous Vuelta Abajo District of  
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Write for Full Informa-  
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### WE SEARCH THE WORLD For Good Men

We supply competent  
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phone or telegraph us when needing  
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work, salary, etc., and we will  
promptly place you in communica-  
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competent man looking for a pos-  
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At New Albany, Ind.

An up-to-date Boiler and Sheet Iron Manufac-  
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Ready to begin work immediately. Can be  
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22 Miles from Norfolk, Va. Beach has large Cot-  
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**Sash, Door and Blind Factory,**  
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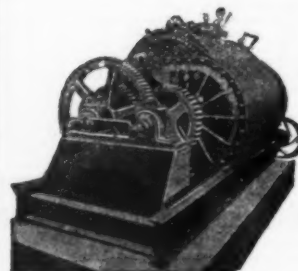
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A modern and thoroughly equipped  
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Manufactures best cotton press in the world.  
Does general repair work. Large lot of valuable  
patterns on hand. Running full capacity. Plant  
and property for sale at a bargain.  
Address Box 455, MERIDIAN, MISS.

So Says Secretary Wilson  
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**CUBAN LEAF** Filler and Wrapper can be  
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The **SOUTHERN PACIFIC**  
Soils and Climate similar to famous Vuelta Abajo District of  
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Factories Built by Us are Built Right  
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**WE OWN IDEAL VIRGIN RICE LAND,**  
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**Axe Handle Shapes and Turned  
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Car load lots, for cash.

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A manufacturer, doing a large foreign  
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430 ft. 2" wide, 3-ply, 6 cts. per foot.  
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380 ft. 3 1/2" wide, 3-ply, 11 cts. per foot.  
400 ft. 4" wide, 4-ply, 15 cts. per foot.  
390 ft. 4 1/2" wide, 4-ply, 17 cts. per foot.  
400 ft. 5" wide, 4-ply, 19 cts. per foot.  
370 ft. 6" wide, 4-ply, 22 cts. per foot.  
270 ft. 8" wide, 4-ply, 30 cts. per foot.  
350 ft. 10" wide, 4-ply, 38 cts. per foot.

Prices are net. F. O. B. Pittsburg, Pa.  
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- 1 14x28 Allis Corliss.
- 1 10x30 Allis Corliss.
- 1 18x24 Atlas automatic.
- 1 18x18 Ridgeway McEwen.
- 1 13x21 Buckeye automatic.
- 1 13x15 McIntosh & Seymour.
- 1 15x16 Weston automatic.
- 1 13x14 Ideal automatic.
- 1 13x12 Ideal automatic.
- 1 13x12 Armstrong & Sims.
- 1 10 1/2"x10 Ideal automatic.
- 1 8x7 Westinghouse, Jr.
- 1 11x17x14 Harrisburg Ideal.
- 2 13x19x15 McIntosh & Seymour.
- 1 13x20 1/2"x15 Armstrong & Sims, C. C.

#### ENGINES.

- 2 24-44x48 tandem compound Cooper Corliss.
- 1 30-36x48 tandem compound Hamilton Corliss, right-hand, wheel 22" diam. x 56" face.
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- 4 16-32x48 tandem compound Cooper Corliss.
- 1 16-27x16 Westinghouse.
- 1 16-28x18 tandem Erie Ball.
- 1 16-36x17 tandem McIntosh & Seymour.
- 1 15-25x16 Erie Ball cross compound.
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- 1 14-25x16 Ball & Wood cross compound, self-contained.
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- 1 13-22x13 Westinghouse.
- 2 13-23x18 tandem Williams.
- 1 13-19x15 tandem McIntosh & Seymour.
- 1 8 1/2"x12x14 tandem McIntosh & Seymour.
- 1 26x72 Corliss, 50-ton wheel.
- 1 28x90 Allis, 1890 frame.
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- 1 24x48 tandem Hamilton Corliss.
- 1 22x42 Harris Corliss.
- 1 21x18 Armstrong & Sims.
- 1 18x48 Knowlson & Kelly Corliss.
- 1 18x48 Allis Corliss.
- 1 18 1/2"x18 McIntosh & Seymour.
- 2 16x16 Ball & Wood.
- 1 15 1/2"x24 Buckeye, tangye frame.
- 1 14 1/2"x24 Buckeye, tangye frame.
- 1 14x16 Safety, New York Power Co.
- 2 13x18 Harrisburg Ideal.
- 1 11x12 McIntosh & Seymour.
- 1 9 1/2"x10 Armstrong & Sims.
- 1 9x12 Ball.

#### BOILERS.

- 1 250 H. P. Babcock & Wilcox, water tube.
  - 1 175 H. P. Sterling, water tube.
- These boilers are practically new.

**Rossiter, MacGovern & Co., (Inc.)**

Electrical and Steam Machinery,

Whitehall Bldg., 17 Battery Place, New York City.

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- 1 14x42 Harris Corliss.
- 1 12x36 Greene Corliss.
- 1 12x30 Lane & Bodley Corliss.
- 1 18x42 Bates Corliss.
- 1 18x28 Watertown Automatic.
- 1 12x24 Wright Automatic.
- 1 10x12 Ball Automatic.
- 1 10x16 Atlas Automatic.
- 1 8x10 Erie City Automatic.
- 1 7x8 Gem Automatic.
- 1 10x20 Throttling Governor.
- 1 11x18 Throttling Governor, with Riding Cut off.

##### Boilers.

- 1 44x14 Half Arch Front.
- 1 54x14 Hor. Tub.
- 1 54x15 Hor. Tub.
- 1 54x12 Hor. Tub.
- 1 100 H. P. Stirring Water Tube
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- 1 84" 3-Drum Royal Invincible Sander.
- 1 Heavy Boring and Mortising Machine.
- 1 Upright Mortiser.

Saws, Planers, Tenoners, Shafting, Hangers, Pulleys, Belting.

**CLEVELAND BELTING & MACHINERY CO.**  
8 Long Street, Cleveland, Ohio.

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One Diebold Safe & Lock Co's No. 42 Safe with Banker's Chest across the bottom. Size of Safe outside, 54x38x28"; inside, 34x26x16". Safe has double outside doors and double inside doors, folding above the chest. Safe is modern in every respect. Chest is 3" construction and closes with duplex hinge and pressure bar. Chest is made with Diebold's Patent Cut-Off Spindle with Anti-Dynamite Device, etc. Safe has been in use only few months. Would make a fine safe for small Bank or Loan Co., etc.

For price and photographs write

**The Pixley Safe & Lock Co.**

Toledo, O., U. S. A.

#### FOR SALE.

One 200 H. P. Erie City Iron works horizontal engine. Two Erie City I. W. tubular boilers, 72" dia. with 84" tubes. Two Erie City I. W. tubular boilers, 60" dia. with 4" tubes. Also other machinery and appliances used in manufacturing Tannic Acid and Sugar, including pumps, centrifugals, conveyors, etc.  
All to be seen at Staunton, Va., by calling on H. H. Smith. For prices address  
O. K. LAPHAN, Lansdowne, Pa.

Steam and Electrical Machinery.

**THOMPSON SON & CO.**

114-116 Liberty St. NEW YORK CITY.

## Largest Stock

FIRST AND  
SECOND-HAND

## MACHINERY.

REBUILT AND  
GUARANTEED.

What are your wants?

**FRANK TOOMEY,**

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#### MENGEL'S MACHINERY EXCHANGE

15 H. P. Geyser Portable Boiler and Engine on wheels. 25 H. P. Portable Duval on skids. 10 H. P. Baxter Engine and Boiler combined. 55 H. P. White & Middleton Gas or Gasoline Engine, 12" by 36". 60 H. P. Hamilton-Corliss Engine, directly connected to 25-ton Linde Ice Machine. 5 and 10-ton Vertical Compressors. 4 25 and 35 H. P. Horizontal Engines. Sharp's Collar and Cuff Ironer. Band Starcher and Ironer. 50 gal. Copper Starch Kettle. 60-light Dynamo. 25 110 volt Manhattan Arc Lights. Cylinder and Job Printing Presses. Paper Cutters. Complete Plants and Machinery of all kinds Bought, Sold and Exchanged. Nearly new 25 H. P. White & Middleton Marine Gasoline Engine.

Mengel's Mach'y Exchange, 21 E. Lombard St., Baltimore Md.

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Engines, Machinery in great variety at  
**LOW PRICES.**

Correspondence solicited by  
**FIDELITY MACHINE AND METAL COMPANY,**  
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#### FOR SALE.

One Lodge & Shipley lathe, 18 in x10 ft.  
0 in. 6 months old; used about 4 days.  
One No. 11 Union Drop Forge Com-  
pany's oil furnace, new. Address

**CHESAPEAKE IRON WORKS,**  
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Second-hand Dynamos, Motors and  
Electrical Appliances. All money sa-  
vers. Repair anything. Have you a  
Dynamo or Motor for sale?

**GUARANTEE ELECTRIC CO.**

122-129 N. Clinton St. CHICAGO.

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At a Sacrifice.

One 1 1/2 yd. Bucyrus Steam  
Shovel in good condition.

One 10"x16" Hoagland Rock  
Crusher.

For detailed information, and  
specifications, address

**The Cameron  
& Barkley Co.**

Charleston, S. C.

#### FOR SALE.

#### ENGINES.

14"x24" Cooper automatic \$400; 14"x20" \$300;  
12 1/2"x24" \$175; 12"x16", 11"x16" center crank,  
two 1 1/2"x24" Porter-Allen automatic \$650 each;  
Vertical engine 6"x20" \$35; 6"x10" \$35; One hun-  
dred horse power tubular boiler \$400; Six 70 H.  
P. tubular boilers \$300 each; One new 65 H. P.  
Scotch boiler \$450; One new 35 horse Scotch  
boiler \$300; One 35 H. P. portable boiler \$200;  
Forty, Forty-five, Fifty and Sixty horse tubu-  
lar boilers; Ten vertical boilers; Fire engine,  
Cole Bros. make, \$500; Thirteen horse Russell  
traction almost new \$500; Two 12 horse tractions  
\$250 each; Ten horse portable engine on wheels  
\$125; Seven sawmills; One 48" Steadman disinte-  
grator with rolls and screens \$300; New boilers  
and engines all sizes.

**D. L. CASEY MACHINE CO.**  
Springfield, Ohio.

**Engines. Boilers.**

9x9 Vertical Center Crank.  
8x12 Horizontal Center Crank.  
4 Vertical Boilers, 10, 15, 18, 25 H. P.  
6 Hoisting Engines, various styles.  
Drill Presses and Planers.

**CONTRACTORS' SUPPLY CO.**  
Park Building, PITTSBURG.

**Bargains in Second-Hand Direct  
Connected Units.**

One 50 K. W. "Eddy" generator directly con-  
nected to 13"x12" "Ames" horizontal automatic  
engine. 400 amperes, 125 volts, 250 revolutions.  
One 25 K. W. "Westinghouse" generator di-  
rectly connected to 10"x12" "Ball" hor. automatic  
engine, 125 volts, 240 amperes, 300 revolutions.

**L. F. REYFERT'S SONS,**  
437-441 N. Third Street, PHILADELPHIA.

#### FOR SALE.

One 6x36-inch Cook's deep well pumping engine  
almost new.  
One 4 H. P. Fairbanks, Morse & Co. gas engine.  
One 40x50-inch split Hill friction clutch pulley.  
Also a lot of large pulleys for which we have no  
use. Apply to

**Ground Hog Plow & Foundry Co., Clarksville, Tenn.**

#### FOR SALE.

75 K. W. direct connected set.  
115 volts, excellent condition,

**J. C. M. LUCAS,**

22 Light Street, BALTIMORE.

## LATHES.

- No. 73 14"x5' Lodge & Shipley.  
No. 78 14"x8' Lodge & Shipley.  
No. 49 20"x10' Taper, Lodge & Shipley.  
No. 47 20"x8' Lodge & Shipley.

### THE LODGE & SHIPLEY MACHINE TOOL CO.

CINCINNATI, OHIO,

U. S. A.

## FANS.

Central station man's opportunity to increase the day load. We offer for immediate delivery, all f. o. b. Cincinnati, the following 125 cycle fans:

150 G. E. swivel and trun., 12 in., 104 volt., \$5.00 each.  
150 Emerson solid, 12 in., 52 volt., \$3 each.  
200 Westinghouse solid, 13 in., 52 volt., \$3.50 each.  
100 G. E. swivel and trun., 12 in., 52 volt., \$4.00 each.

JOHN A. STEWART ELECTRIC CO.  
430 Sycamore St., Cincinnati, Ohio.

## FOR SALE.

- 50 H. P. Engine, side crank, self-contained, 12x18 cylinder, flywheel 66" diameter, 14" face; all appurtenances, built by Casey & Hedges, Chattanooga, Tenn., and none better made. In use about three years, with best care.
  - 25 H. P. Boilers, Scotch marine, return tubular, stacks 25", 26" diameter; all appurtenances and pipe connections. Built by Casey & Hedges, and none better built. In use about three years, with best of care.
  - Worthington Prospecting or Sinking Pumps, 4 1/2"x2 1/2"x14", steam pipe 1/2" discharge 1 1/2" suction 2", capacity 3000 gals. of sandy, gritty water. In fine condition.
  - Centrifugal Pump, 2" discharge, 2 1/2" suction. Made by Thos. Williamson, Hockessin, Del. A splendid pump, in fine condition.
  - Flory Hoisting Engine, cylinder 3 1/2", friction drum 10" diameter, 16" long. Capacity 900 lbs., with single line.
  - Horse Power Hoisting Drums, with automatic safety attachment. Made by Thos. Carline Sons, Allegheny, Penn.
  - Fairbanks Trussed Lever Scales, Platform 10' x 9' 1/2", capacity 26,000 lbs.
  - Fairbanks Portable Scales, capacity 1000 lbs. large platform for barrows.
- Also a large lot of Pulleys, 6" to 36" diameter and 6" to 28" face, iron and wood split.  
Belting, Chesapeake brand, 2 1/2" to 32" and 4" to 14" wide.  
Rubber, 12, 13 and 18" long, 6" face.  
Also, complete machinery for washing clay.  
1 Imhauser Watchman's Time Detector, 10 stations.

KAOLIN MANUFACTURING CO.  
Waynesville, N. C.

## Machinery Bargains.

### Second-Hand—Good Condition.

Vertical Boilers to 40 H. P., Hor. Tub. Boilers to 50 H. P., Locomotive Boilers 20, 30, 100 H. P., Westinghouse Engine 20 H. P., Chandler & Taylor auto. high speed 5x10, Hor. plain slide valve engine to 25 H. P., Steam pumps all sizes, lot large valves.  
Wood Mortisers, Boring machines, Gray & Wood planers, 26x6 and 26x12 double surfacers, Swing Saw, Jig Saw, Variety Moulder, 16" Fox Lathe, 16" Spinning Lathe, 5 speed lathes, 10" Sc. Cutting Lathe, 8" Boynton Shaper.

#### NEW MACHINERY.

10" to 26" Screw Cutting Lathes, 26" to 28" Drill Presses, Power Hack Saws, Emery Grinders, Buffalo Forges, 2 1/2, 3, 5, 7 1/2 H. P. Gas Engines, 3 to 15 H. P. Vertical Engines, 12 to 30 H. P. Auto. High Speed Engines.  
Shafting, Hangers, Pulleys, Belting, etc. Pipes, Valves, Fittings, the largest stock in the South. Write what you want or have to sell.

J. D. MALLORY,  
BALTIMORE, MD.

Highest prices paid for Dynamos, Motors and Electrical Apparatus of any description.  
Complete Stations purchased.  
Write us for full descriptions and get our cash offers.

J. W. KOHN & CO.  
14 Merwin St., Cleveland, O.

## FOR SALE.

1 5-Ton Electric Crane, 400 ft. travel, double track, 50 ft. span, 10 K. W. Motor, New; 1 Webster Heater and Purifier for 500 to 2000 H. P. Boilers, New, both very cheap; 1 G. & G. Air Compressor, also 1 Clayton, 10 1/2"x12, Cheap; 1 G. & G. Vacuum Pump, 14x10x12, also 12 other pumps, large and small; 1 Blake Single Pump, 6x5, 14x10x12; 1 Knowles Single Pump, 14x10x12, 6x5, practically new, also 28 other pumps all sizes; 2 20-Ton Duggeons Improved Hydraulic Jacks; 1 No. 3 Dallet Portable Drill complete; 1 3/4 Cylinder Rand Drill complete; 16 20 to 60 H. P. Hor. Slide Valve Engines; 1 15 H. P. Center Crank and 1 25, 30 and 35 H. P. self contained, excellent condition; 1 8x10 Automatic Self Oiling, self contained Center Crank Ideal Engine, and 1 16x12 Erie Ball Engine, Both Practically New; 3 125 and 100 H. P. each, 2 80 H. P., 3 60 H. P. and 7 20 to 40 H. P. Hor. Return Tubular Boilers, All Guaranteed, complete, also 140, 45, 50 and 60 H. P. Vertical Boilers, complete, very cheap; 50,000 ft. Elevator Rope, New, guaranteed equal to any made, all sizes and lengths, and 3000 ft. 1" Crucible Steel, slightly used, also lot of other pumps, belting, engines, dynamos, motors, new and second-hand rails, pipe, and anything you desire. Send us your inquiries. 2 wooden tanks, 2500 gal. capacity and one 5000 gal. round.

## WANT TO BUY.

Lot of Wire Hoisting rope and cables, 3/8 to 3" diameter, new or second-hand; 15, 20 and 25 Gasoline Engines, second-hand; dynamos, motors, wooden or iron tanks, 500 to 5000 gallon capacity; 12 Hor. Slide Valve Engines, 10 to 60 H. P.; 5 Hoisting Engines, friction drums; 5 Air Compressors, steam driven, 300 cubic ft. and up; 8 60 to 150 H. P. Hor. and Ver. Boilers, complete; pumps, hoisting engines, rails, etc. We Buy Anything You Have to Offer. Give full description.

Anthracite Machinery & Supply Co.

ALLENTOWN, PA.

## FOR SALE.

### Partial List Second-Hand Machines

- 13"x5' Pratt & Whitney, rise and fall rest, with taper.  
14"x54' Putnam, rise and fall rest.  
14"x5' Prentiss, rise and fall rest.  
14"x5' Blalodell, rise and fall rest, with taper.  
15"x5' Poeter, rise and fall rest.  
15"x5' Prentiss, rise and fall rest, with taper.  
16"x5' Pratt & Whitney, rise and fall rest, with taper.  
16"x7' M. H. & O., plain rest.  
16"x10' Fay & Scott, compound rest.  
18"x5' Reed, plain.  
18"x5' Lodge & Davis, compound rest and taper.  
24"x10' No Name, incomplete.  
26"x5' Betts Lathe, compound rest.  
30"x5' Stark, plain.  
36"x14' Betts Lathe, compound rest.  
No. 3 B. & O. Turret.  
No. 14 Garvin Special Forming Turret Lathe.  
24"x24" Sellers Turret Lathe.  
16"x5' Johnson Turret Lathe.  
18"x5' Lodge & Davis Chucking Lathe.  
Six-Spindle Miles, Bement & Co. Arch Bar Drill.  
26" Bickford Upright Drill.  
30" Barnes Upright Drill.  
Three-Spindle Upright Slide Sensitive Drill.  
Three-Spindle Garvin Sensitive Drill.  
24"x24" Sellers Planer, one head.  
42"x42"x10' Whitcomb Planer, two heads.  
42"x42"x18' Betts Planer, one head.  
16" Smith & Mills Shaper.  
No. 2 Keyseat Milling Machine.  
No. 2 Garvin Plain Milling Machine.  
No. 1 B. & S. Universal Milling Machine.  
No. 4 1/2 Garvin Plain Miller.  
No. 3 Garvin Plain Miller.  
2 No. 2 Garvin Plain Millers.  
1 No. 4 1/2 Brainerd Plain Miller.  
No. 4 Schlenkers Double-Head Bolt Cutter.  
2" Pratt & Whitney Cutting-Off Machine.  
12" Lowell Machine Co.'s Slatter.  
Double-Head Pratt & Whitney Horizontal Boring Mill.  
Cold Saw, 18" Blade, Pump and Pan.  
30" Springfield Knife Grinder.  
Wells Bros. Cutter and Reamer Grinder.  
Springfield Tool Grinder, 36" Wheel, with pump.  
2 Speed Lathes.  
4 35 H. P. Portable Boilers.  
1 Blacksmith Bellows.  
Also a complete line of new machines. Correspondence solicited.

Brown & Zortman Machinery Co.,  
PITTSBURGH, PA.

## FOR SALE.

### Five Blowing Engines.

36" Steam Cylinder, 84" Air Cylinder, 54" Stroke.  
Engines were built by Cuyahoga Engine Works and can be seen in operation at our plant at Columbus, Ohio. Can be delivered about Nov. 1st.

The Columbus Iron & Steel Co.  
COLUMBUS, OHIO.

## FOR SALE.

- 1-54 in. x 12 ft. horizontal tubular boiler.  
1-12x30 horizontal engine.  
1-7 and 14x10 fore and aft marine engine.  
6 steam pumps—all sizes.

E. J. CODD CO., Baltimore, Md.

## FOR SALE.

We have over 300 assorted size Machine Tools of every description.  
Send us your wants.

Girard Machine & Tool Co.  
491 N. Third Street, PHILADELPHIA, PA.

## CAN YOU USE THESE?

- 11 K.&J. Cars, 36-in. ga., 3-yd at \$50  
30 Western, 24-in. ga. 1 1/2-yd., at \$30  
9x14 Porter 36-in. ga. Dinkle, \$2,400  
12x18 Rogers 36-in. ga. Dinkle, \$3,750  
30-ton, 1 1/2-yd., Marion Shovel, \$3,400  
45-ton, 1 1/2-yd., Bucyrus Shovel, \$4,750  
55-ton, 1 1/2-yd., Vulcan Shovel, \$5,750  
65-ton, 2 1/2-yd., Bucyrus Shovel, \$5,900

All the above for immediate shipment. Telegraph or "long distance" me if interested.  
I have just issued a printed list of some special bargains, covering new and second-hand machinery generally, for contractors, railroads, mines, quarries and manufacturing plants.

WILLIS SHAW, Machinery, 171 La Salle St., Chicago

## BARGAINS FOR QUICK DELIVERY.

- No. 2 Gates Crusher.  
No. 3 Gates Crusher.  
No. 5 Style B, Gates Crusher.  
Double column Drop Hammer, cylinder 14"x36", fine order.  
Good Second-Hand Engines.  
12-ton Kelly Roller, fine as new.  
New Well Drilling Machine, cheap.  
Marion AA Shovel, fine condition.

WE SELL  
Engines, Boilers,  
Pumps and Quarry  
Supplies,  
Concrete Mixers,  
Horse Rollers,  
Steam Drills,  
Air Compressors,  
Belting, Hose,  
and a full line of  
Contractors' Supplies.

CONTRACTORS' SUPPLY & EQUIPMENT CO., 232 Fifth Avenue, CHICAGO.

## Easton Foundry & Machine Co.

Main Office and Works, Easton, Pa.

New York Office, 36 E. 22nd St.

### BEAMS, CHANNELS and ANGLES.

#### IMMEDIATE DELIVERY.

CUT TO LENGTH. WRITE FOR QUOTATIONS.

Beams	Channels	Angles—Even Legs
6-in. .... 12 1/2 lbs.	6-in. .... 8 lbs.	(Continued)
7-in. .... 15 "	7-in. .... 9 1/2 "	4-in. x 4-in. x 3/8-in.
8-in. .... 18 "	8-in. .... 11 1/2 "	6-in. x 6-in. x 1/2-in.
8-in. .... 22 1/2 "	10-in. .... 15 "	6-in. x 6-in. x 3/4-in.
9-in. .... 21 "	12-in. .... 20 1/2 "	
9-in. .... 25 "	15-in. .... 30 "	Angles—Uneven Legs
10-in. .... 25 "		3-in. x 2 1/2-in. x 5/16-in.
10-in. .... 30 "		4-in. x 3-in. x 5/16-in.
12-in. .... 31 1/2 "		4-in. x 3-in. x 3/4-in.
12-in. .... 40 "		4-in. x 3-in. x 7/16-in.
15-in. .... 42 "		5-in. x 3 1/2-in. x 1/2-in.
15-in. .... 50 "		5-in. x 3 1/2-in. x 3/4-in.
18-in. .... 55 "		6-in. x 3 1/2-in. x 3/4-in.
20-in. .... 65 "		6-in. x 3 1/2-in. x 1/2-in.
24-in. .... 80 "		6-in. x 4-in. x 1/2-in.

All angles, channels and beams up to and including 15-in. x 50-lb. are carried in 60-ft. and 65-ft. bars; 18-in. 55-lb. beams in 30-ft., 35-ft. and 36-ft. bars; 20-in. 65-lb. beams in 35-ft., 38-ft. and 40-ft. bars; 24-in. 80-lb. beams in 40-ft., 45-ft. and 48-ft. bars.

## CASTINGS OF EVERY DESCRIPTION AND UP TO 10 TONS

### BRIDGES, BUILDINGS, ROOFS AND OTHER Structural Steel

#### FOR SALE.

- 1 300 H. P. Cross compound Slat engine, \$3000.  
1 18x42 Harris Corliss, overhauled, \$1200.  
1 12x18 Skinner engine, \$300.  
1 34x72 George Corliss, with balance wheel, \$6.00 per H. P.  
1 24x48 Woodruff & Beach, automatic, \$500.  
1 20x60 George Corliss engine, \$1200.  
1 10x24 Ryder, automatic, \$150.  
1 6x8 Fitchburg, vertical, \$85.  
1 iron stack, 52x36, \$150.  
1 Corliss, segment wheel 16x60" face.  
1 hydraulic press, 8" rams, 48x36" platens.  
1 300 to 400 H. P. quill, practically new, including boxes.  
2 tanks, 9" diameter, 8" deep, 3/4 shell, \$85 each.  
1 400 H. P. Berryman heater, \$150.  
1 100 H. P. Berryman heater, \$75.  
1 75 H. P. National heater, \$50.  
1 75 H. P. National heater, \$50.  
1 400 H. P. Knowles jet condenser, \$350.  
1 250 H. P. Deane condenser, \$200.  
5 72"x18" H. R. T. boilers, first-class condition, without fittings, \$200 each.

F. H. DAVIS & CO., 53 State St., Boston, Mass.

#### FOR SALE at

### CROWN POINT, N.Y.

- 1 Smoke Stack, 8' diameter, 130' high, self supporting.  
3 Hartman Stoves, complete, 66"x16".  
3 Hartman Stoves, complete, 46"x15".  
1 9"x15" Farrell Stone Crusher.  
16 Cylinder Boilers, 36"x41".  
Air Tanks and Receivers from blowing engine.

### HENRY A. HITNER'S SONS,

Huntingdon St. and Aramingo Ave., Philadelphia.

#### FOR SALE.

- 3 Torrance Balling Heads and Creels, 48-in. cards, 48 to 70 ends, good as new.  
1 Foster Coner, 100 drums, 6-in. cone. First class condition.  
Above machinery will be sold at a reasonable price.

1 Hurricane Dryer, 1 Apron 36-in. wide, with self-feed. In good condition; price \$250.  
MOHAWK MFG. CO., Oswego, N. Y.

#### FOR SALE.

A 4 cutter, Seaman carving machine in good order. One Benedict bed clamp.  
LUGER FURNITURE CO., Minneapolis, Minn.

## FOR SALE.

- 1 65 ton Vulcan steam shovel.  
1 50 ton Vulcan steam shovel.  
10 9x14, 36" gauge, saddle tank, contractors' locomotives.  
1 30 ton 4 wheel, standard gauge, saddle tank locomotive.  
4 American type, 35 ton, standard gauge locomotives.  
1 Baldwin consolidation, standard gauge, 50 tons.  
25 5 yd. two way standard gauge, steam frame Western dump cars.  
5 36" gauge 2 1/2 yd. swing dump cars.  
25 36" gauge 3 yd. side dump cars.  
1 9x15 Climax crushing plant, complete with engine and boiler.  
1 12x24 Climax crushing plant, complete with engine and boiler.  
2 New Era graders, complete with traction engines.  
1 Western spreader, mounted on standard gauge car.

If you want to buy or sell contractors' plant of any description, we can help you. Correspondence solicited.

#### CONTRACTORS EQUIPMENT CO.

1124 Betz Bldg., Philadelphia, Pa.

## Baker, Stillwell & Hart

#### Manufacturers' Agents,

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BIRMINGHAM, ALABAMA.

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|---------------|-------------------|---------------|
| Fig Iron,     | Rails,            | Fire Brick,   |
| Bar Iron,     | Nuts and Washers, | Babbitt Metal |
| Coal,         | Bolts,            | Tool Steel,   |
| Coke,         | Nails,            | Engines,      |
| Steel Shapes, | Foundry Supplies, | Boilers,      |
| Cars,         | Car Wheels,       | Castings,     |
- Second-hand Machinery of all kinds.

## FOR SALE.

1 18x42" Left Hand Harris Corliss Engine. Thoroughly Repaired. GUARANTEED good as new.

CLYDE MACHINE WORKS,  
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## FOR SALE. BRIDGES.

- 1 50 ft. steel plate girder bridge, double track.  
1 500 ft., 4 spans 125 ft. each, riveted pier bridge, double track, 24 ft. wide. Viaduct joining pier 570 ft. double track.

## CARS.

- 73 80,000 lb. hopper bottom ore cars.  
100 tons 80-lb. Relaying Steel Rails.

HENRY A. HITNER'S SONS,

Aramingo Ave. and Huntingdon St.

PHILADELPHIA, PA

## Nearly as Good as New.

	Cost	Price
Drilling Machines, Barnes, No. 20...	\$60.00	\$45
Blower, No. 3, Pressure .....	22.50	15
Grinding Machine, B. Standard .....	30.80	23
Grindstone, power, 30-in. ....	25.50	18
Motor, Sprague, 2-H.P., 500 volts. ....	117.00	90
Motor, Sprague, 4-H.P., 500 volts. ....	162.00	125
Pumping Jack, Hill, geared. ....	20.00	15
Rope Drive and Countershaft .....	38.00	25
Steel Balls, 1 inch, 96.....	6.62	2

ALL F. O. B. WASHINGTON.

FISHER & SXTON COMPANY,

123 G Northeast, WASHINGTON, D. C.

## FLOUR MILL MACHINERY.

**ROLLER MILLS—Double Stands.**  
One 6x12, three 6x18, three 9x18 Case.  
One 9x24, one 9x14 Allis.  
One 9x24 and one 9x30 Todds & Stanley.

**IRON FRAME VERTICAL FRENCH BUCK MILLS.**  
Two 30" Harrison, two 30" Sprout, Waldron,  
Three 18" Richmond, one 14" Sprout, Wal-  
dron.

**WOOD FRAME HORIZONTALS.**  
One 22" Bradford, and one each, 18", 24",  
30" and 36" Attrib.  
Stock constantly changing. Write for what  
you want.

STRAUB MACHINERY CO.,  
Cincinnati, Ohio.

18"x42" Hewes & Phillip's right-hand  
Corliss engine, wheel in 1/8, 14"x38" face.  
Berryman Heater, Jack shaft, etc., low  
price, gilt edged condition.

COUSE & BOLTON,

NEWARK, N. J.

## Wheels and Axles

FOR SALE, CHEAP.

20 pair 3 ft. Archibald Wheels (iron hub) with steel  
axles, all new. These are VERY SUITABLE for  
MAKING TRUCKS or DOLLIES for HAND-  
LING PILES, POLES, TIMBER, etc. A bargain  
for any such purpose. For full description address  
FISHER & SXTON CO.  
123 G St., Northeast, Washington, D. C.

FOR SALE.

## Drain or Culvert Pipe.

125 lengths of 30" Cast Iron Pipe, practically as  
good as new, at Charleston, S. C.

FRANK SAMUEL,

Harrison Building, PHILADELPHIA, PA.

FOR SALE.

## Keny n Tenting and Drying Machine.

Used only one year. In perfect order.

Address SUMMIT PROOFING COMPANY,  
24 Wooster St., New York.

New and Second-Hand

## Iron Tools and Woodworking Machinery

Corliss and Double Valve Engines for Trolley  
Roads and Electric Lighting Stations.

H. C. BAKER & CO.

114 N. 3d Street, Philadelphia, Pa.

## 2ND-HAND TOOLS.

**Lathes.**  
18 in. x 1 ft. Finfield.  
20 in. x 4 ft. New Haven.  
27 x 11 Geo. Place, heavy.  
28 x 18 ft. Fay & Scott.  
17 Stewart Speed Lathes.  
18 in. x 8 ft., comp. rest,  
Lowell.  
Axle Lathes, Bement (2).  
**Planers.**  
24 in. x 4 ft. heavy, Leeds.  
30 x 8 Feather.  
36 x 8 Wheeler.  
24 in. x 24 in. x 7 ft. New  
Haven.  
**Shapers.**  
16 in. Geared, Western.  
18 in. Ohio, crank.  
22 in. Prentiss-Juengst  
Friction.  
**Drills.**  
Ceiling, 3 ft. arm, Radial.  
Ceiling, Boilermakers.  
30 in. Prentice Bros.  
**Screw Macks.**  
No. 60 Garvin, 1/4 in., with  
wire feed.  
Garvin Hub Mch., 4 1/2 in.  
hole.  
**Grinders.**  
No. 2 Surface, Universal  
Co.'s.  
24 in. x 18 ft. Springfield  
Surface.  
**Wood Working.**  
No. 1 Greenleaf, Auto. R. R.  
Cut-off Saw.  
16 in. Goodell & Waters  
Planer, 1 1/2 in.  
Frybll Planer and Joiner.  
Ex. heavy 4 side Timber  
Planer and seven other  
machines.  
**Miscellaneous.**  
Sq. Arbor Gage Fox Lathe.  
50 lb. Biles Drop Hammer.  
+0 lb. Merrill Drop.  
Oil Separator, American.  
No. 1 B. & S. Univ. Miller.  
No. 2 P. & W. Screw Slot-  
ter.  
13 in. Bement Slotter.  
10 H. P. N. Y. Safety En-  
gine, etc., etc.

Write your requirements.

G. L. BENNETT, 113 Liberty St., New York.

## TWISTERS FOR SALE.

We are installing looms and have had to throw  
out twistlers recently purchased. We offer these  
for sale at a very reasonable figure. They are  
Draper's latest model, 160 spindles each, wavy  
wind, single head bobbins, 3/8 inch space, 6 inch  
traverse, 2 1/2 inch flat top patented twistler rings.  
Cost \$3.65 per spindle. Address

Eugenia Manufacturing Company,  
JONESBORO, N. C.

## FOR SALE CHEAP.

Several Dynamos, Motors, Engines, Boilers,  
Pumps, Steam Traps, Damper Regulators, Iron  
Pulleys, Shafting, Etc. Practically good as new.  
Get our figures before buying elsewhere. We  
can beat 'em all on prices.

American Electric Supply & Mfg. Co.

27 Thames St., New York City.

## FOR SALE.

12 Western Wheeled Scrapers.  
10 Drag Scrapers.  
4 Western Railroad Plows.  
2 Rooter Plows.  
1 two and one-half ton Ames Disc Roller.  
WILLIAM HANLEY, Contractor, Bradford, Pa.

## BARGAINS—CHEAP.

One Deane Duplex Comp. Pump, 14x26x11x18.  
One 30x13 Blake Pattern Crusher, nearly new.  
Three Hoisting Engines. Rails, Locomotives.

L. E. KENNEDY & CO.

17 Broadway, New York City.

## GREENE ENGINE

20 by 42 for sale. As good as new.  
Can be seen at

Manhattan Rolling Mill,

362 Ave. A, New York

## FOR SALE.

### Immediate Delivery.

One Westinghouse Standard Engine, 11X11 Est.  
H. P. 60.  
One Westinghouse Standard Engine, 11X10 Est.  
H. P. 60.  
Two Return Tubular Boilers, each 60"x18", Est.  
H. P. 80 each.  
Two Smith-Vaile Single Hydraulic Pumps, 12X1 1/2  
X14.

The above machinery is in good order and was  
in operation up to April 30th, when it was taken  
out on account of enlargement and changes in our  
steam plant and other machinery equipment.

Address

NORTH CAROLINA COTTON OIL CO.

CHARLOTTE, N. C.

## 150 Horse Power Boiler, Upright Tubular.

In fine condition. Too small  
for our use. Must dispose of  
it quickly. Need the room.

APPLY AT

THE WM. POWELL CO.

2525 Spring Grove Avenue,

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## Relaying Rails For Sale.

IMMEDIATE DELIVERY.

250 tons 52-lb. Steel Tee Rails with  
Angle Plates.  
1000 tons 58-lb. Steel Tee Rails with  
Angle Plates, Tidewater delivery.

GEORGE H. CAREY, 1 Broadway, New York

## BARGAINS.

30 in. x 12 ft. Eng. Lathe, N. H. v'n.  
26 in. x 14 ft. Eng. Lathe, Davis.  
24 in. x 12 ft. Eng. Lathe, Davis.  
20 in. x 10 ft. Eng. Lathe, R. M. & C.  
62 in. Radial Drill, Mueller, New.  
72 in. Radial Drill, Mueller, New.  
3-20 in. B. G. & S. F. Drills, Davis.  
3-20 in. B. G. & S. F. Drills, Hoefer.  
38 in. B. G. & S. F. Drill, New Haven.  
16 in. Crank Shaper, Gould & Eber.  
24 in. Tpl. grd. Shaper, Lodge & B.  
72 in. x 30 in. x 12 ft. Planer, Pond.  
72 in. x 60 in. x 15 ft. Planer, Steptoe  
No. 1 Univ. Grinder, Diamond.  
No. 3 Univ. Grinder, Diamond.  
No. 3 Profiler, Garvin.  
No. 14 1/2 Univ. Miller Becker Brain'd  
No. 1 Hand Miller, Garvin.  
No. 18 Biles Pattern Press.  
No. 19 Biles Pattern Press.  
No. 30 Power Press, Niagara.  
No. 3-0 Geared Shear, New Doty.  
25 in. Heavy Boiler Maker's Punch  
9 in. Slotter, New Haven.  
16 in. Slotter, Bement.  
60 in. H. v. Boring Mach., Bement.  
2 in. Pipe Machine, Jarecki.  
900 lb. Drop Hammer, Merrill Bros.  
40 in. x 8 ft. Horiz. Boring Machine.  
Grant & Bogert Milling Machine.  
SENSITIVE DRILLS, SCREW MA-  
CHINES, MILLERS, PRESSES, Etc.  
Can give bargains at all times in  
new and second-hand machines for  
immediate shipment.  
GEO. E. AFFLECK,  
107 Liberty St., N. Y. C.

## A Splendid Lot of Tools.

**Lathes.**  
14x6 Hamilton La., C. B.  
and 10 in. 3-j. Univ.  
chk. fitted.  
14x6 Blaisdell Eng. La.,  
R. F.  
15x8 Stud Lathe.  
16x5 Putnam Eng. La.,  
R. F.  
16x8 Davis & E. Eng.  
Lathe, C. R.  
15x8 Hensley-N., C. R.  
30x8 Ames Eng. Lathe, P. R.  
31x10 Lathe & M., P. R.  
22x8 Eng. Lathe, P. R.  
22x8 Lathe & M., C. R.  
14x16 Fish Eng. Lathe,  
Plain N., Power and  
Feed.  
14x8 Lodge & Davis Fox  
Turret La.  
No. 32 Monitor Lathe.  
**Planers.**  
20x20x14 Lathe & Morse.  
22x16x16 Phoenix.  
22x22x6 Powell Planer.  
22x22x8 Clement.  
22x22x5 Powell Planer.  
**Drills.**  
70 in. Gang Radial Drill.  
30 in. Pratt & Whitney.  
14 in. 1-speed Drill, Parr.  
No. 2 two-speed Drill,  
Garvin.  
No. 4 four-speed Drill,  
Garvin.  
**Milling Machines.**  
No. 16 Plain Miller, Gar-  
vin, with vertical speed  
attachment.  
No. 8 Hand M. M., Gar-  
vin.  
Photo and description on application.  
**Miscellaneous.**  
No. 2 Crank Pin Turning  
Machine.  
No. 1 Diam. Universal  
Grinder.  
No. 1 Garvin Gear Cutter.  
No. 2 1/2 Div. Head and  
Tailstock.  
2 in. Colburn Boring and  
Turning Mill, complete  
with chuck.  
3 in. Hurlbut & Rogers  
Cutting-off Machine.  
No. 3 Garvin Profiler.

THE GARVIN MACHINE CO.

Spring and Varick Sts., NEW YORK.

## Second-Hand Machinery.

Two 75 H. P. Continental Boilers, 100 lbs.  
One 40 H. P. Marine Firebox Boiler, 190 lbs.  
Three 40 H. P. Return Tubular.  
One 50 H. P. Return Tubular.  
Two 54x12 Return Tubular.  
One 4 H. P. Upright Boiler and Trimmings.  
One 75 H. P. Firebox Boiler, 110 lbs.  
Two 150 H. P. Return Tubular Boilers.  
One 1000 H. P. Corliss Engine.  
One 300 H. P. Meyers Engine.  
One 40 H. P. Murray Iron Works Engine.  
One 20 H. P. Dutton Hor. Engine and Trimmings.  
One 20 H. P. Raming Hor. Engine.  
One 18 H. P. Watertown Hor. Engine & Trimg's.  
One 10 H. P. Upright Engine.  
One 30 H. P. Lambert Gasoline Engine.  
One 20 H. P. Otto Gasoline Engine.  
One 20 H. P. Slide Valve Engine.  
One 20 H. P. Skinner Center Crank Engine.  
One 40 H. P. Center Crank Engine.  
One 1 1/2 H. P. Vertical Engine.  
One 3 1/2 H. P. Globe Gasoline Engine.  
One 25 H. P. Columbus Gasoline Engine.  
And many others. Write for prices.  
D. GRUPE & SONS, Davenport, Iowa.

FOR SALE.

1 22x52 R. H. Watts Campbell Corliss Engine.  
1 10x12 Ideal Automatic Engine.  
1 10x7x10 Worthington Duplex Pump.  
1 15 ton Road Roller for sale or rent.  
1 Little Giant Steam Shovel.  
1 10x7x10 Worthington Duplex Pump.  
Iron Tanks, 300 to 1000 gallon capacity.  
JAS. S. BRADEN, 26 Cortlandt St., New York.

## FOR SALE. Immediate Delivery.

### AIR COMPRESSORS.

Two Rand Straight Line, "Class C," 18"x18"x24".  
One Ingersoll-Sergeant, Class "G," Duplex, 20"  
x30 1/2"x24".  
One Norwalk (2 stage) 14"x14"x20 1/2"x16".  
Two Rand Duplex (3 stage) 18"x14"x28 1/2"x24 1/2"  
x22".  
One Rand Duplex Corliss, 20"x20"x26".

### BOILERS.

Four Babcock & Wilcox Water Tube, 208 h. p.  
each, shaking grates.  
Eight Horizontal Return Tubular, 60"x16".  
Three Horizontal Return Tubular, 72"x12".  
Four Horizontal Return Tubular, 72"x16".  
Three Horizontal Return Tubular, 60"x16".  
Nine Horizontal Return Tubular, 72"x18".

### ENGINE.

One 20"x40" Buckeye, girder frame, hand wheel  
in half, 12"x31" face.

### LOCOMOTIVES.

16" gauge Locomotives.  
Four H. K. Porter 9"x14", saddle tank.  
Two Vulcan 9"x14", saddle tank, built 1900.

### RAILS.

200 tons 30-lb. steel relayers.  
200 tons 35-lb. steel relayers.  
500 tons 56-lb. steel relayers.

### CARS.

Eighty 80,000-lb. Ore Hopper Cars, made by  
Allison Mfg. Co.

### PUMP.

1 Worthington Compound Duplex Condensing  
Pump, 25"x43"x17 1/2"x36", 20" suction and 18"  
discharge. Capacity, 3,000,000 gallons.  
All of the above in A-1 order and ready for  
immediate delivery.

We buy and sell Air Compressors, Engines,  
Locomotives, Rails, Cars, Bridges, Boilers, Hoist-  
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purchased.

### Steam Street Motor Car.

Baldwin standard gauge, compound cylinders,  
only four years old, weight 60,000 pounds. Cost  
new, \$5900. For quick acceptance will be sold  
at a great bargain, subject prior sale and inspection.

### BOILER STACK.

1000 feet of 34" Boiler Stack, 5-16" material. This  
stack is first-class in every respect and will be  
sold at a bargain.

### CYLINDER BOILERS.

8 Boilers, 40" long x 34" diam., good for 100 lbs.  
steam pressure, without fixtures or fittings. For  
quick sale will be sold cheap.

A. V. KAISER & CO.

222 South Third St., PHILADELPHIA, PA.

### ENGINES.

One 18x24 Harris-Corliss Engine.  
One 16x20 S. C. Washington Iron Works' Engine  
self-contained.  
One 13x23 S. C. Cardwell Engine.  
One 11x18 C. C. Talbot Engine, Box-bed.  
One 14x16 S. C. Engine.  
One 11x15 Richmond Locomotive Works' S. C.  
One 11x14 A. & C. C. Engine.  
One 7x8 Vertical Engine.  
One 6 H. P. Vertical Engine.  
One 4 H. P. Vertical Engine.  
One 30 H. P. Farquhar Traction Engine.  
One 15 H. P. Aultman & Taylor Traction Engine.  
One 12 H. P. Birdsell Traction Engine.  
One 10 H. P. Frick Engine and Boiler mounted  
on wheels.

### BOILERS.

One 80 H. P. High-Pressure R. T. Boiler, good  
for 120 lbs. steam working pressure.  
One 80 H. P. R. T. Boiler.  
One 70 H. P. R. T. Boiler.  
One 60 H. P. R. T. Boiler, Half-Front.  
One 50 H. P. R. T. Boiler, Full-Front.  
One 50 H. P. Economic Boiler.  
One 40 H. P. Economic Boiler.  
One 40 H. P. R. T. Boiler, Half-Front.  
One 25 H. P. R. T. Boiler, Half-Front.  
One 20 H. P. R. T. Boiler, Half-Front.  
One 15 H. P. Locomotive Type Boiler on wheels.  
One 30 H. P. Vertical, and several smaller sizes.  
Also several sizes of pumps and other machinery.  
The above are in A-1 condition. Write for  
particulars.

Jno. A. Waters & Co., Richmond, Va.

## FOR SALE.

Fifty Whitin Welman Top Flat Cards,  
with 40 tops 40 ins. wide. Cylinder 42  
x40 ins. Doffer 40x18 ins. Floor space  
8 ft. 3 ins. x 5 ft. 3 ins., with coils.  
Production 125 lbs. per day. Some of  
these cards are only 8 years old, bal-  
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ning. Also 150 sets Steel Clothing in  
extra good condition; 100 Doffers; 150  
Mason Looms, 44"; 10 Ashworth Re-  
volving Top Cards. For full informa-  
tion and price apply to

WM. J. DUNN,

Fall River, Mass

FOR SALE.

## Feed Water Heater.

One Goubert horizontal, closed, 800 H. P. heater,  
flanged for 14 inch pipe connections, newly re-  
ceived from factory, never used. A great bargain  
at special price offered. Address

MICHIGAN ELECTRIC CO., Detroit, Michigan.

FOR SALE.

## Two Pairs 16x20 Link Motion Engines.

Can be used for Hoisting  
Purposes.

CHAS. T. LEHMAN,

BIRMINGHAM, ALA.

We have just secured several large manufacturing plants and we wish to dispose of the contents which are principally

**Boilers, Engines, Lathes, Planers, Milling Machines, Shavers, Screw Machines, Drill Presses, Slab Millers, Onon-Side Planers and Machine Tools in General.**

Send for list and get prices.

**Girard Machine & Tool Co.**

491 N. 3d Street, PHILADELPHIA, PA.

### Wood-Working Machinery.

30x6 Single Dennis Cabinet Planer.  
30x6 Single Buss Planer.  
24x6 Single Pony Planer, J. A. Fay.  
24x6 Single Pony Planer, Graves & Clusman.  
24x6 Single Extended Bed, W. & M. Cheap.  
30x6 Double Surfer, divided feed rolls, S. A. Woods.  
54" Egan Back Knife Lathe.  
16" Late Porter Jointer, head slotted.  
Mortiser, foot power, W. F. & J. Barnes.  
7" 4-sided S. A. Woods Moulder.  
10" 4-sided Hall & Brown.  
Railway Cut-off Saw, J. A. Fay.  
Egan Segment Circular Re-saw.  
32" Fay Band Saw.  
42" Columbia Sander, 3-drum.  
24" Invincible Sander, 3-drum.  
Self-feed Rip Saw, Hall & Brown.  
Self-feed Rip Saw, Hoosier.  
Scroll Saw, foot power, Barnes No. 7.  
New Swing Saws, both double and single col.  
Tenoner, Buss, double end.  
Gasoline Engines, all sizes. Fans, all sizes.

### PRICE MACHINERY CO.

507 Great Northern Bldg.  
CHICAGO, ILL.

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#### Boilers.

Two 70 H. P. Hor. Return Tubular. Two 65 H. P. Locomotive. One 25 H. P. Locomotive. One 25 H. P. Vertical. One 20 H. P. Vertical. One 10 H. P. Vertical.

#### Engines.

One 7x8 Vertical. One 10x12 Horizontal. One 12x24 Horizontal. One 12x28 Horizontal. One 14x24 Horizontal. One 18x24 Horizontal. One 10x14 "Buckeye" Automatic. One 12x15 "Idle" Automatic. One 15x18 "Idle" Automatic. Two 10x12 "Ball" Automatic.

Also a lot of Pumps, Hoisting Engines, Motors, Rails, Pipe, Wood Working Machinery, Shafting, Hangers, Wood and Iron Pulleys.

ALL AT BARGAINS.

**Huntington Machinery & Supply Co.**  
WILKES-BARRE, PA.

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1 1/4-yard Marion Shovel, New York delivery, \$3000.  
Two (2) complete Contractors' Plants, Steam Shovels, Locomotives and Dump Cars, Pennsylvania delivery. Ready for immediate delivery.

Write or wire

**Jno. T. Driscoll & Co.**

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#### FOR SALE.

One 18x24 Pittsburg Locomotive. Six Drivers. Weight 42 tons. Condition good. Price \$3500.00. Immediate shipment.

**W. F. DAVIS,**  
Birmingham, Ala.

#### FOR SALE.

1 Locomotive, 36" gauge, 11x16, 15-ton capacity.  
9 Box Cars, 54' long, 60,000 lbs. capacity. 30 Box Cars, 30' long, 40,000 lbs. capacity. 200 tons 56 lb. Steel Relays. 150 tons 60-lb. Steel Relays. 50 tons 53-lb. Steel Relays. Also New Rails, 8 to 40 lbs.

**L. WOLF & BRO.,**

50-51-52 Mitchell Bldg., CINCINNATI, OHIO.

### FOR SALE CHEAP.

Lot of **MILLING MACHINERY** from the CRESCENT FLOURING MILLS, Rochester, N. Y., which is being dismantled:  
Six double 24x24 Noye King Roller Mills.  
Twelve Noye Round Flour Dressers, 30x86.  
One Odell Round Flour Dresser.  
One No. 3 Richmond Horizontal Bran Duster.  
Two Oliver Upright Bran Dusters.  
Two Mills Air Belt Purifiers.  
Four No. 6 Special Smith Purifiers, 9 ft. long.  
One No. 6 Special La Croix Purifier.  
One Fractional Register for Flour Packer.  
One No. 2 Richmond Warehouse Separator.  
One No. 2 Aspirator for wheat.  
One Eureka Smutter.  
One Solid Brush Machine.  
Two No. 3 Victor Steamers.  
One Beal Steamer.  
One Turn Head with Indicator Stand.  
Four-inch Caldwell Conveyors with lining.  
Twenty Stands of Elevators with 20x5 pulleys 4 1/2 inch, 4-ply cotton belts, 4-inch buckets.  
Boot Pulleys with adjustable metal bearings.  
Trunking is white wood varnished.  
Price made complete in any length desired.  
The above are not old, worn-out machines, but are up-to-date of this class, and for practical purposes good as new, ready to go to work without repair. Write for price.

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### Wood Working Machinery for Sale CAR SHOP EQUIPMENT.

One 28"x12" Atlantic double surfacer.  
One 14" Goodell & Waters vertical car shop joiner.  
One Atlantic car shop tenoner.  
One Greenlee four-spindle horizontal car boring machine.  
One Greenlee hor. hollow chisel car mortiser.  
One 44" Fryhill hand saw.  
**MISCELLANEOUS WOOD WORKING MACHINES.**  
One 28"x12" Fay single surfacer.  
One 10" Glen Cove Inside Moulder.  
One 6" Rowley & Hearnance four-side sticker.  
One Shimer, No. 6, reversible spindle variety moulder.  
One Tidey swing cut-off saw.  
One Smith & Phillips window frame machine.

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External fire; direct heat; size 4'x16'; revolves on track and trundle wheel, driven from internal gear at front end; has been used about one year; good set of grate bars; fire doors; stack 35' long, 16" in diameter; flighted inside to agitate material; everything in first-class condition. This Dryer will take 100 moisture from 150 yds. of sand or gravel in 10 hrs. with moderate fire. Address "T", care Manufacturers' Record.

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Two 3-roller mills; granite rolls, 7 inches in diameter, 15 inches long. Made by Lehmann, Dresden, Germany. The outside roll is fitted with a worm gear. These mills are as good as new. Address

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1142 N. Hancock Street, PHILADELPHIA.

### NEW LIGHT STEEL RAILS.

12 lb. to 40 lb. per yard and Splices.  
New Heavy Section to 50 lb.  
Narrow Gauge Railway Equipment.  
Cars, Locomotives, Switches, etc.

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### FOR SALE—RELAYING RAILS.

1000 tons 40-lb. Steel Relaying Rails and Splices.  
1500 tons 58-lb. Steel Relaying Rails and Splices.  
1000 tons 60-lb. Steel Relaying Rails and Splices.  
500 tons 63-lb. Steel Relaying Rails and Splices.  
For Prompt Shipment.

**Continental Iron & Steel Co.**  
25 Broad St., New York.

1 1/4-yd. L. G. Crane Trac. Shovel, new.  
1 1/4-yd. L. G. Spec. Trac. Shovel, new.  
1 1/4-yd. Vul. Giant D Special, 1901.  
Western all steel Road Grader, new.  
New Era Sr. Steel Level Grader, 3 mos.  
65 1-way 3-yd. Bloomberg Dump Cars, 3 mos.  
32 side & rotary 1 1/4-yd. W. Dump Cars, new.  
4 miles nearly new 30-lb. Angle Joints & Frogs

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256 Broadway, NEW YORK.  
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### MANUFACTURERS

### Light Steel Rails,

12, 16, 20, 25, 30 and 35 lbs. with splices.  
Prompt delivery.

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CUMBERLAND MD

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1 9x14 Locomotive, 36" gauge.  
3 Chicago Pneumatic Riveting Hammers.  
3 Philadelphia Pneumatic Riveting Hammers.  
1 125 H. P. return tubular Boiler, 125 lbs. pressure.  
1 Blake Air Compressor, 10-30x24 low pressure.  
1 Blake Air Compressor, 8-12x12 low pressure.  
1 15-ton Kelly Road Roller.  
1 Air Compressor, 12-12x18, high pressure.  
J. C. Saxton, 18 Broadway, New York City, N.Y.

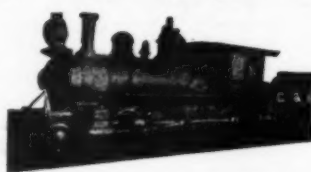
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LIGHT SECTIONS, 8 TO 40 POUND.

Special Price to Dealers.

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### 30 STANDARD AND NARROW GAUGE LOCOMOTIVES

for contractors' plant, lumber and mining railways, and over 200 flat, box and logging cars, coaches and large quantities of new and second-hand rail; also Steam Skidders; low rates to all points south.

OFFICE: 301-307 NEW ATLANTIC BLDG., NORFOLK, VA.

SHOPS AT Suffolk, Va.

### RAILS FOR SALE.

Immediate Shipment.

500 tons 80-lb. Relaying Steel Rails with Angle Splices, Pennsylvania delivery.  
800 tons 60-lb. Relaying Steel Rails with Angle Splices, Indiana delivery.  
500 tons 40-lb. Relaying Steel Rails with Angle Splices, Ohio & Penna. delivery.  
700 tons 70-lb. Relaying Steel Rails with Angle Splices, Ohio delivery.

Also NEW 16, 20, 25, 30 lb. Rails for prompt shipment.

We BUY good Relaying Rails for cash. Write us if you have any to offer.

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## NEW RAILS.

12,500 tons New Steel T Rails, 60, 70, or 80 lbs. per yard. July and August delivery.

### Railroad Construction.

Steam and Electric Roads  
Built and Financed.

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552-554 Bullitt Bldg., Philadelphia.  
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### For Sale—Rails and Locomotives.

One 20x24 Baldwin consolidation.  
One 19x24 American type.  
Two 15x24 American type.  
One 18x24 Mogul.  
One 16x24 Mogul.  
Three 17x22 six-wheel switchers.  
Five 12x14 Forney type.  
One 12x16 Forney type.  
One 9x14 four-wheel.  
One 12x22 four-wheel saddle tank.  
One 12x18 four-wheel, with front truck, trailing tender. All standard gauge.  
In 3-ft. gauge Locomotives we have:  
One 12x18 Forney type.  
One 9x14 six-wheel saddle tank, with fuel tender.  
One 7x12 four-wheel saddle tank.  
One 8x16 four-wheel saddle tank.  
Also new and relaying rails of all weights.  
Write us for prices and terms.  
BIRMINGHAM RAIL & LOCOMOTIVE CO., Birmingham, Ala.

#### FOR SALE.

Several Narrow Gauge Engines 10 to 20 tons; also standard from 40 to 60 tons. 1 16x24 Switcher in splendid condition. Stationary Boilers and Engines. 1 Perkins Shingle Machine as good as new. Agent for the Russell Wheel and Foundry Co. Cars. Also the Parker Steam Skidder.

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### Locomotives and Cars for Sale.

One 14-ton Baldwin, rear tank, standard gauge.  
Three 20-ton American type Baldwins, air brakes, 36" gauge.  
One 17-ton Climax Geared, 36" gauge.  
Five Climax logging cars, 36" gauge.  
Steam shovels, hoisting engines, etc.

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**RAILS, CARS and LOCOMOTIVES, FROGS, SWITCHES, Etc.**

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ANNISTON, ALA.

Manufacturers of

**Railroad Crossings, Frogs,**

Switches, Switch Stands, Rail Braces, Etc.

### SECOND-HAND

## Locomotives

### 54 TON BALDWIN STANDARD GAUGE WITH TENDER.

Cylinders 15x24".  
2 drivers on each side 60" diam.  
Tires 13 1/2" thick.  
Wheel base, 7' 6".  
1 set 4 wheel trucks under front end.  
No brake.

### 40 TON BIG FOUR STANDARD GAUGE WITH TENDER.

Cylinders 14x22".  
2 drivers on each side 47" diam.  
Tires 13 1/2" thick.  
Wheel base 7'.  
Steam brake.

### 35 TON BROOKS MOGUL STANDARD GAUGE WITH TENDER.

3 drivers on each side 41" diameter.  
Tires 2 9-16" thick.  
Cylinders 13/16x18".  
Air Brakes.

### 6 TON RYAN & McDONALD 30" GAUGE SADDLE TANK.

Cylinders 7 1/2x10".  
2 drivers on each side 24" diam.  
Wheel base 34".

Engines, Boilers, Pumps, Wood Working Machinery and Machine Tools of every description  
Send for complete Stock List.

## WICKES BROTHERS,

—OFFICES—

808 Frick Building, Pittsburg, Pa.

ALSO

New York City. Chicago, Ill. Saginaw, Mich.

#### FOR SALE.

17 NEW 36" gauge 30,000 lbs. capacity

## Flat Cars

For Prompt Shipment.

**Kilby Locomotive & Machine Works,**  
ANNISTON, ALA.

#### FOR SALE.

## NEW STEEL RAILS.

12, 16, 20, 25, 30, 35 and 40 lbs., with splice bars, bolts and spikes. Immediate shipment from stock.

#### JOHN J. HANEL & CO.

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For Mill, Mine, Railway and Factory

**WALTER A. ZELNICKER SUPPLY CO.**  
In St. Louis.

BRANCHES:

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Surplus stock of 30, 70, 75, 80 and 85-lb. (new) Billet Rolled Steel Rails. Will sell cheap.

#### RICHARDSON & CO., Inc.

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#### IRON BROKERS,

And dealers in New and Second-hand Machinery. Also carry in stock Hoisting Outfits and Light Section Rail for contractors' use.

#### FOR SALE CHEAP.

Six Standard Gauge Locomotives.

In good condition. Weight on drivers 25 tons.

#### CAINE & PLITT,

824 Real Estate Trust Bldg. PHILADELPHIA, PA.  
Long Distance Telephone 3-52-58.



**FOR SALE.**

We own a choice lot of  
**RELAYING**  
**25 lb. and STEEL RAILS**  
**30 lb.**  
and Splice Bars and Spikes for same. Also a  
number of Frogs, and Stub and Split  
**SWITCHES.**

If you want to buy either new or re-laying  
Rails—any weight, or Switches, write us.

**ROBINSON & ORR,**

419 Wood Street, Pittsburgh, Pa.



**MANUFACTURERS**

**Light Steel Rails**

16-20-25-30-35 and 40 lbs. per yard.

Prompt shipment on all orders.

**SCHONTHAL IRON & STEEL CO.**

Mills and General Offices,

CUMBERLAND, MD.

**N. Y. Elevated R. R.**  
**LOCOMOTIVES**

Ready for Immediate Delivery.  
Excellent Condition.

4' 8 1/2" Gauge, Forney Type, Cylinders  
11"x14", 11"x16", 12"x16".

Suitable for Logging Roads, Contrac-  
tors, Switching, &c.

**BENJAMIN WATSON,**

(Coffee Exchange Bldg.)

66 to 70 Beaver Street, N. Y. CITY.

Steel Rails, Cars, Locomotives, R. R. Supplies.

ST. LOUIS' LARGEST SCRAP  
IRON HOUSE.

**Cohen-Schwartz Rail and Steel Co.**

Head Office and Plant: Main & North Market Sts.  
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ST. LOUIS, MO.

Correspondence Solicited.

**LOOK THIS OVER.**

**For Sale or Rent.**

One 7x12, 42" gauge H. K. Porter 42" gauge loco.  
One 5x16, 42" gauge W. H. Bailey & Co. saddle  
tank locomotive.  
One 10x12 standard gauge dummy type locomotive.  
Two 16x24 standard gauge American type with 8  
wheel tenders.  
One 4-ton 36" gauge loco., also several 30" gauge.  
About 25, 45" gauge 4 yard capacity dump cars,  
O'Connor patent.  
12 36" gauge 2 1/2 to 3 yard cars thoroughly rebuilt,  
good as new.  
One Worthington compound duplex steam pump,  
12x18 1/2 x 10 1/2 x 10.  
One 25 h. p. and 12 h. p. traction engine; several  
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300 tons 60 1/2-lb. steel relaying rails with angle bars,  
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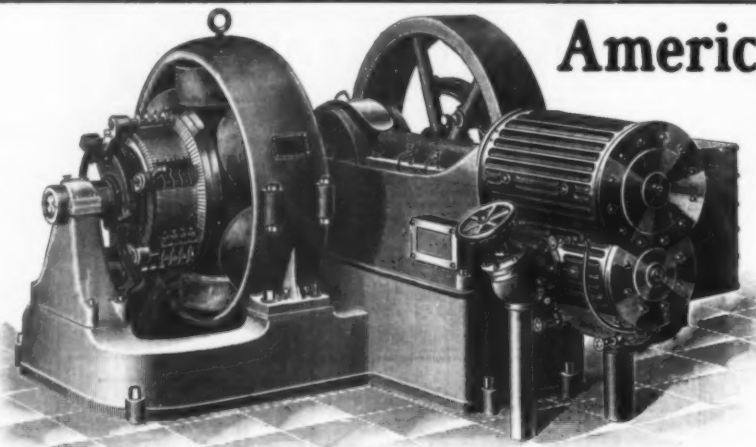
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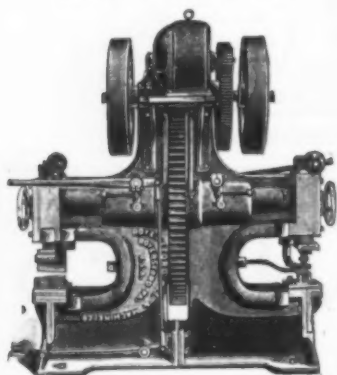
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material is made in the vitrified process by which the

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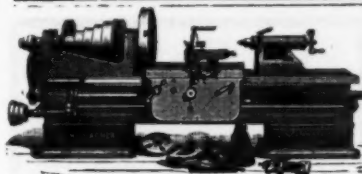
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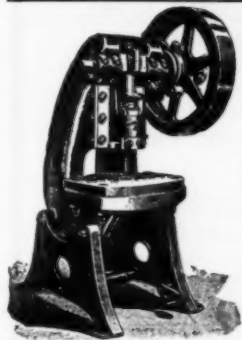
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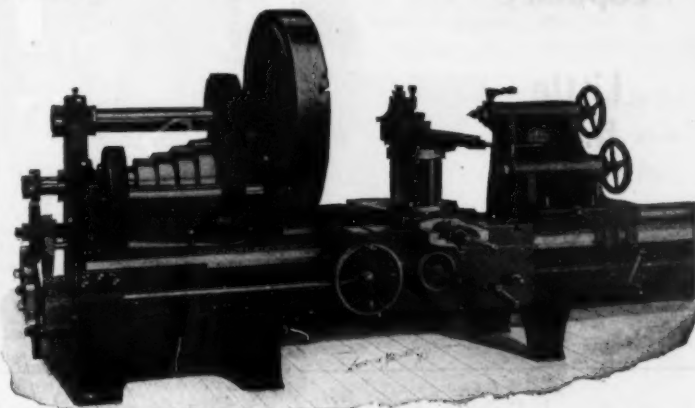
It was about as big a move as a man could make on this earth without stepping off. It was to be expected that he would adapt himself to his new life, make new friends and all that, but—

When he was in Alabama, at Birmingham, he got acquainted with my double spindle lathe, and when he reached West Australia and undertook to manage the mechanical end of a big gold mine, he missed my double spindle lathe and wrote home about it. Just as soon as he got my details he cabled for a lathe.

All this just goes to show how indispensable my lathe is to a man who has once used one and knows its value.

Have you ever tried one of these lathes that a man will send half 'round the world for? They have two spindles, you know, 36 in. swing for medium work and 48 in. swing for big work. Take up the floor space of one lathe, have the capacity of two lathes, and two mighty good ones at that.

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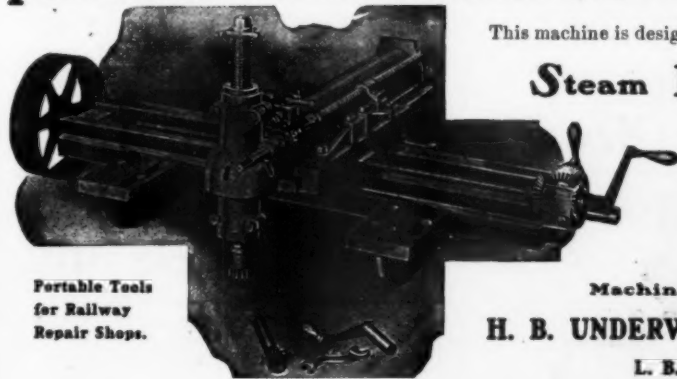
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This machine is designed for facing

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A few of the "56 POINTS OF VANTAGE" embodied in  
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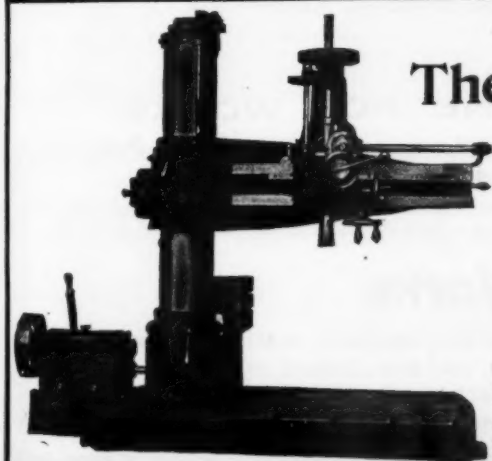
The arm is made in pipe section in order to overcome the combined stresses of twisting and bending.

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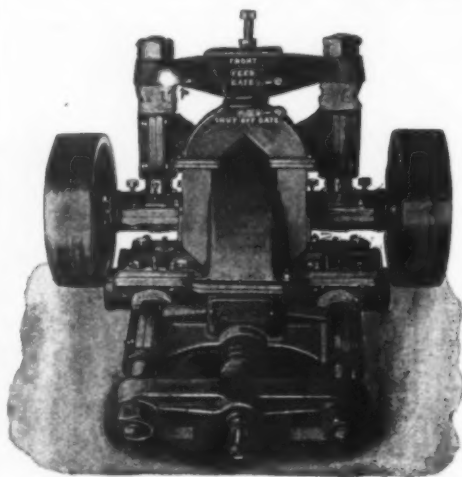
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Grinds { Pebble Rock, 4 to 5 tons per hr., 90 per cent. 60 mesh.  
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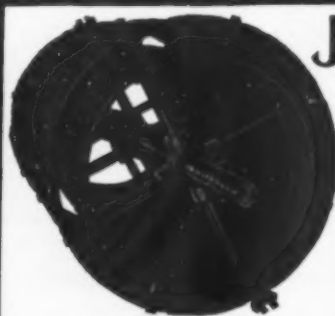
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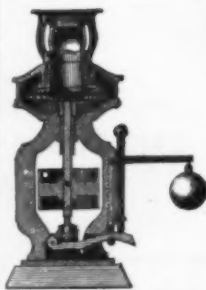
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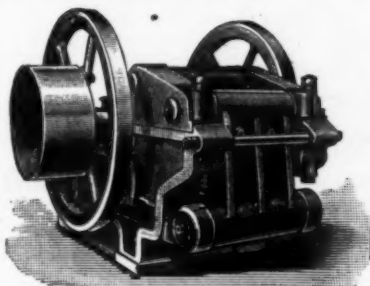
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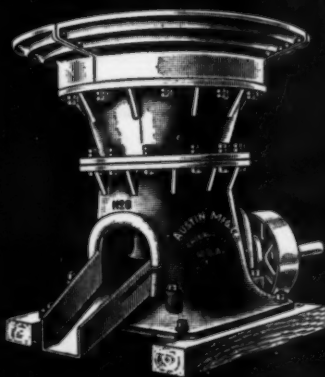
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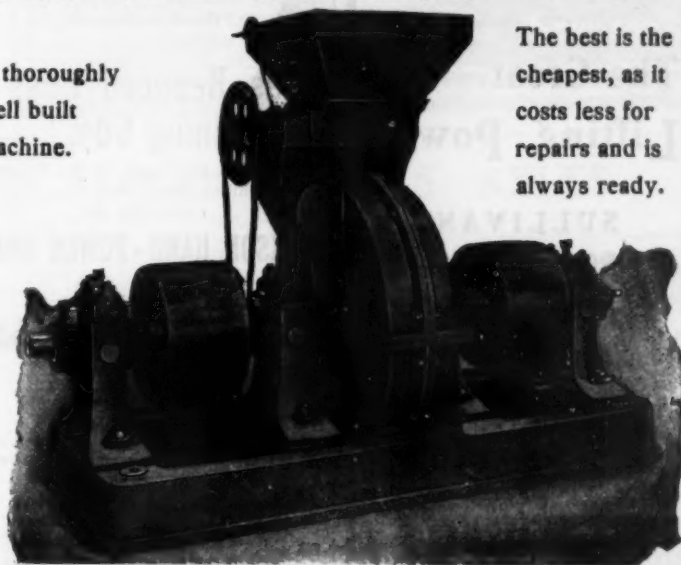
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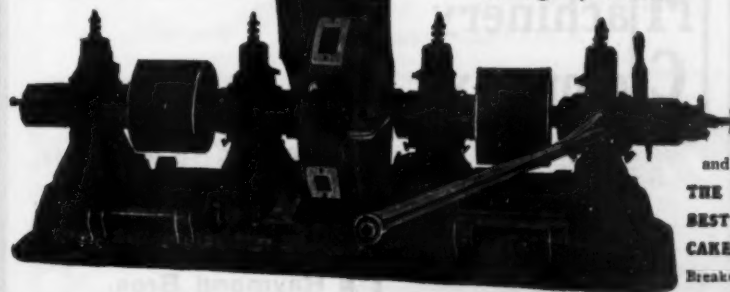
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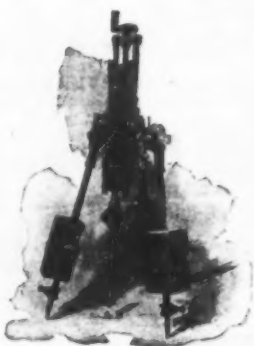
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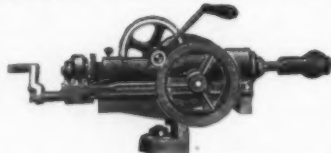
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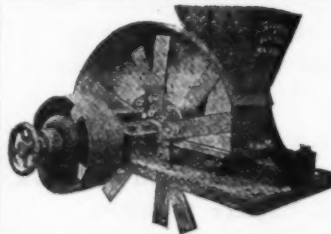


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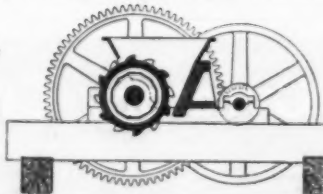
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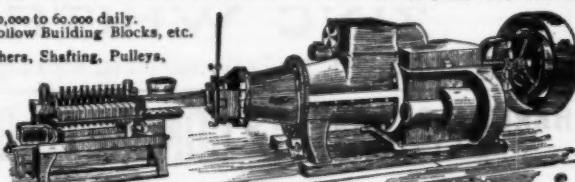
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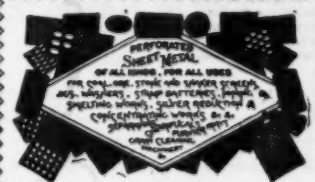
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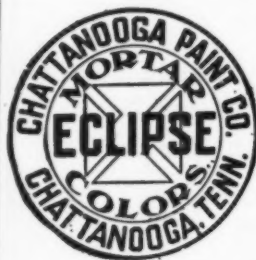
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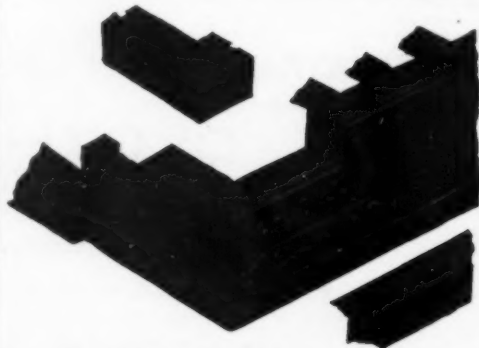
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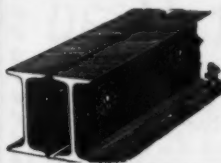
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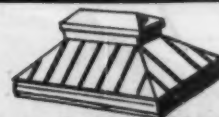
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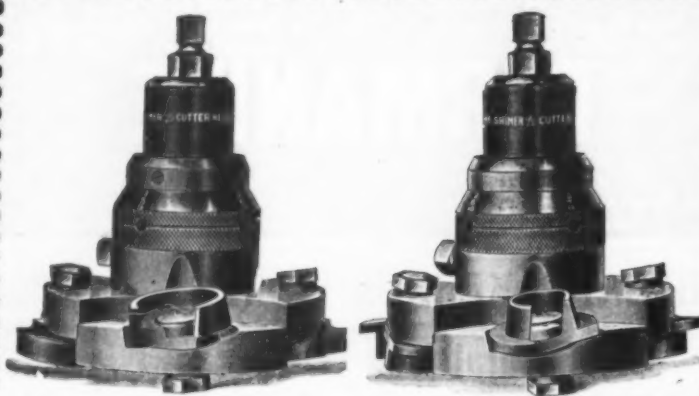


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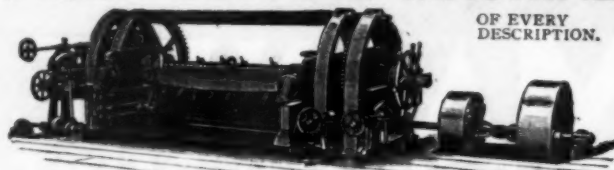
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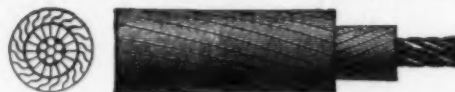
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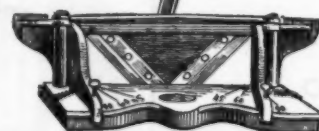
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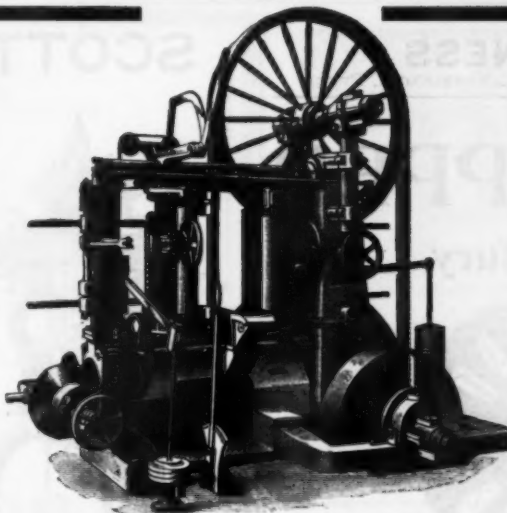
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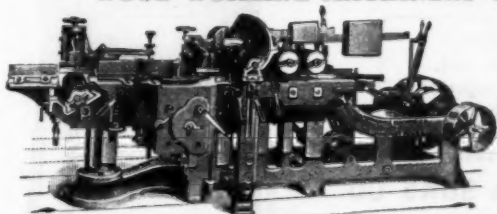
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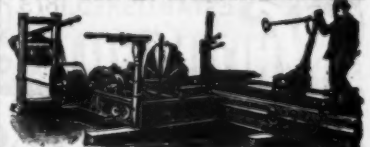
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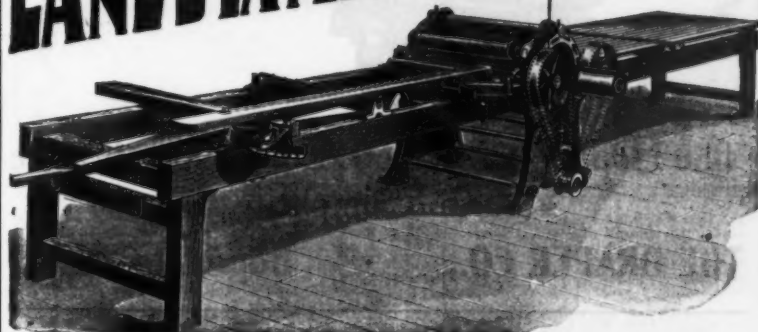
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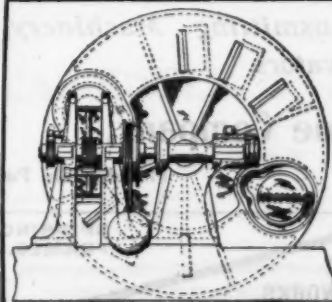
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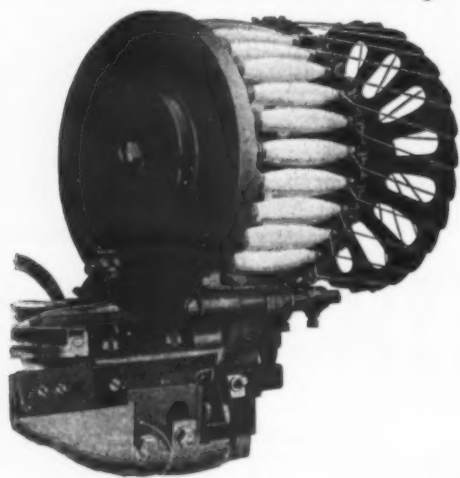
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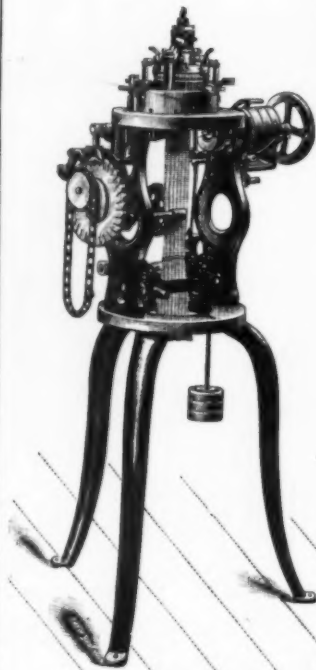
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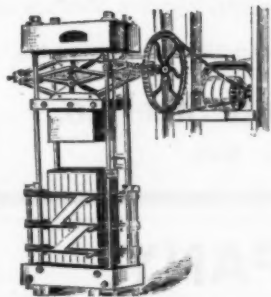
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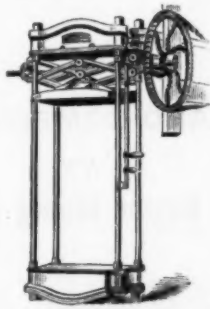
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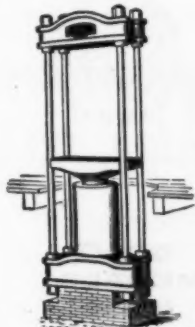
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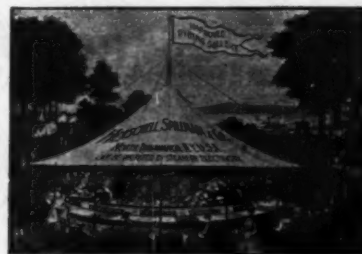
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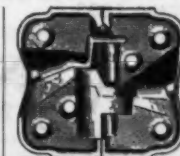
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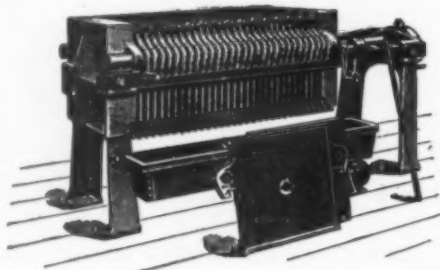
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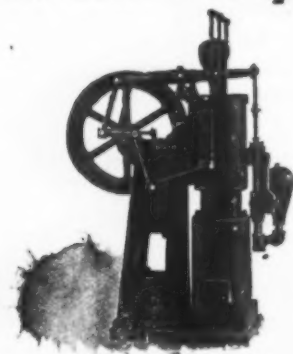
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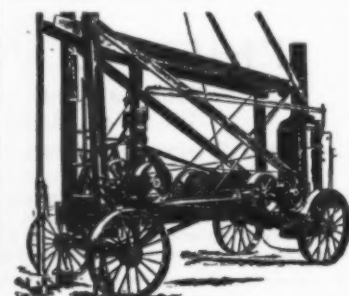
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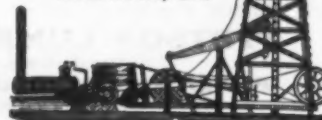
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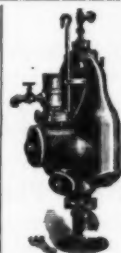
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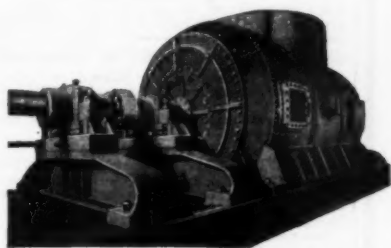
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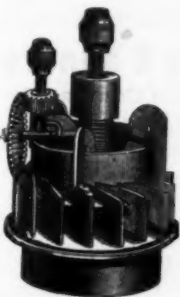


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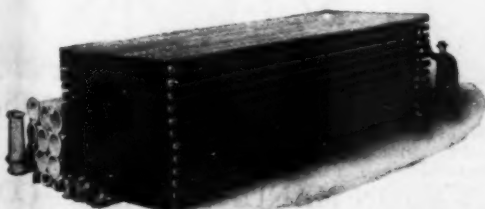
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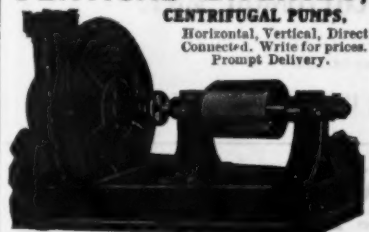
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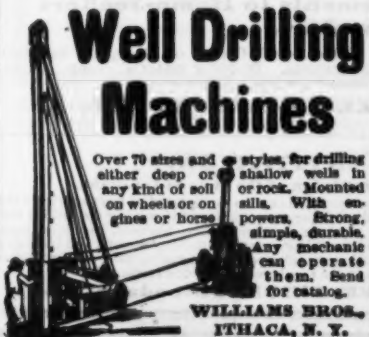
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An unsurpassed location for the investment  
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clothing, flour, machinery, articles of tin, copper and sheet iron, agricultural implements, and furniture  
and other articles of wood, marble or stone; soap, stationery, ink and paper, boat building and fertilizers  
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you need to build your plant on,  
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for many years, and during the Civil War, while the blockade was effective, Georgia and Florida kept the South supplied.

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Along the lines of the

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are hundreds of towns extending you a hearty welcome.

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Abundance of raw material, cheap fuel, plenty of good labor and unsurpassed transportation facilities tend to make the territory traversed by these lines superior for the successful investment of capital in

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DEARBORN DESK COMPANY,

MEMS. OF TYPEWRITER CABINETS EXCLUSIVELY.  
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(INCORPORATED).

W. S. MARSTON, A. B. &amp; C. E., Prin'l.

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A limited number of Boarding Pupils will be taken into the families of the teachers, where they will receive all the care and attention of home life.

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For All Purposes.

## The Best. More Light

Where You Want  
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A 16 C. P.  
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will give as much  
**USEFUL LIGHT**  
as a 32 C. P. Oval Anchored  
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A SHELBY LAMP will  
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cent. MORE LIGHT in  
USEFUL DIRECTIONS  
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## IT WILL.

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guarantee results, because  
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be satisfied.

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## DYNAMO

(Thompson-Ryan Patents),

and

## Automatic Engine

(McEwen Patents),

combine the best materials, technical  
skill and workmanship in their con-  
struction. No machine is shipped  
without having undergone at least one  
full day's test under full-rated load.

Our Illustrated Catalog gives im-  
portant details of these machines.

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### Chandelier Manufacturers,

CATALOGUE ON  
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CHANDELIERS FOR FINE  
RESIDENCES AND LARGE  
BUILDINGS

OUR SPECIALTY.

ORIGINAL DESIGNS FURNISHED.

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Prompt Shipments.  
Lowest Market Prices.  
Low Freight Rates.  
Let us have your next order.

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Lamps, Transformers,  
Insulating Cloths  
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W. H. JENKS,  
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AND DEALER IN

ELECTRICAL SUPPLIES OF EVERY  
DESCRIPTION.

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Insulator Pins, Red Cedar or Chestnut  
Telephone Poles, or Red Cedar  
of Any Description,

— do not fail to correspond with —

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## STANDARD ELECTRIC CO.

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We will furnish your  
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a complete Electrical Equip-  
ment and GUARANTEE our  
work.

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chase from us a complete line of  
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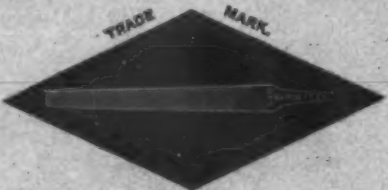
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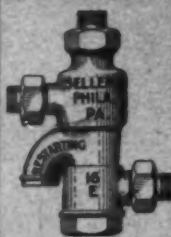
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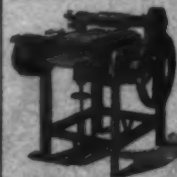
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